REFLEXIVITY IN MEADOW MARI: BINDING AND AGREE*

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Abstract. According to the Canonical Binding Theory (Chomsky 1981), anaphors must be bound in their local domain and pronominals must be free. The discovery of "long-distance anaphors" (e.g. Thrainsson 1976, Giorgi 1984), which violate the locality condition, induced the search for independent criteria. Giorgi (1984:310) proposed a widely adopted criterion: "pronouns can have split antecedents and anaphors cannot". Recent minimalist binding theories derive this property of anaphors from the way a dependency on the antecedent is established which makes it intrinsic to binding. However, this leads to an important problem, since some languages have elements that i) may be locally bound and, hence, look like anaphors; yet ii) allow split antecedents which is a property of pronouns (e.g. Japanese and Korean, Katada 1991, Kasai 2000). In this paper I analyze the data of another such language, namely Meadow Mari (Uralic), and show that such facts require a modular approach to binding (see Reuland 2011). I further argue that here the left periphery contains the relevant factor.

1. Introduction

According to the Canonical Binding Theory (Chomsky 1981), anaphors must be bound in their local domain and pronominals must be free. The discovery of "long-distance anaphors" (e.g. Thrainsson 1976, Giorgi 1984), which violate the locality condition, induced the search for independent criteria to distinguish anaphors from pronominals. Giorgi (1984:310) proposed a widely adopted criterion: "pronouns can have split antecedents[1] and anaphors cannot". Recent minimalist binding theories derive this property of anaphors from the way a dependency on the antecedent is established – via Agree (Rooryck & Vanden Wyngaerd 2011), movement (Drummond et al. 2011 building on Hornstein 2000) or SELF-movement and Agree-based chains (Reuland 2011). This kind of theoretical treatment makes the property intrinsic to binding.

[1] An antecedent is split if it consists of (at least) two DPs, which occupy separate argument positions.

However, it also leads to an important problem, since some languages have elements – I call them *semi-reflexives*[2] – that i) may be locally bound; and yet ii) allow split antecedents (e.g. Japanese and Korean, Katada 1991, Kasai 2000). To resolve this problem, it is crucial to carry out in-depth studies of languages with such elements and assess which factors are involved. In this paper, I review data from one such language, namely Meadow Mari (Uralic). My account for the Meadow Mari puzzle is based on the fact that (semi-)reflexives are relational (representing a proxy relation, Reuland & Winter 2009 building on observations in Jackendoff 1992 and Safir 2004). In Meadow Mari, I propose, the relational noun is grammaticalized and, hence, deficient as it is left with one open argument unlike a lexical relational noun (such as *spirit*, *body* or *father*) that can by itself close this argument. The value for this argument is supplied by Agree which accounts for the syntactic constraints on the antecedent and the binding domain.

The structure of the paper is the following: in section 2, I will discuss the puzzles Meadow Mari poses for modern binding theories. Section 3 is devoted to the description of the Meadow Mari anaphoric system. Section 4 and 5 present the analysis, and section 6 concludes.

2. The puzzles of Meadow Mari

Meadow Mari [mhr] belongs to the Uralic language family. The population of Meadow Mari native speakers in Russian Federation totals almost 388,000 (Lewis et al. 2013).[3] Meadow Mari is spoken primarily in the Mari El Republic, east of the river Volga (the capital is Yoshkar-Ola, 500 km east of Moscow), some speakers live in the republics of Tatarstan, Bashkortostan, and Udmurtia, as well as in the regions of Nizhny Novgorod and Perm.

The Meadow Mari data below were collected in the village of Staryj Torjal, where the Sernur-Morkin dialect of the Meadow Mari is spoken. The data were compiled first in 2000–2001 in linguistic expeditions organized by the Moscow State University, and later in 2011–2012 in a series of consultant sessions in Moscow and in another trip to the village.

Meadow Mari is an agglutinative language characterized by vowel harmony. The basic word order for Mari is SOV. The language has a

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[2] In this paper I use 'pronoun' as a cover term for both anaphors and pronominals. I use the notion 'anaphor' in the traditional GB-sense including reflexive and reciprocal pronouns. Following the tradition of the Reflexivity theory, I call a pronoun a 'reflexive' if it reflexive-marks a predicate (Reinhart & Reuland 1993) or, in later terminology, enforces reflexivity (Reuland 2011).

[3] Census includes Hill Mari [mrj]. According to the previous editions of Ethnologue, the number of Mari speakers came to 451,000 in the 2002 census and to 525,500 in 1993 (United Bible Societies), while the figure for the ethnic Mari population lowered from 604,300 in the 2002 census to 548,000 in 2010.

large set of morphological cases (due to the use of local cases) and uses postpositions. Meadow Mari lacks grammatical gender.

In the verbal domain the verb obligatorily agrees with the subject in person and number and distinguishes three tenses: present, past and narrative past. Meadow Mari employs both a verbal and a nominal reflexive strategy. The verbal strategy is realized by the detransitivizing suffixes –*alt* and –*əlt*– and is limited to a closed set of verbs.

In the situation when two co-arguments are covalued, Meadow Mari employs two pronominal forms: a complex expression *škenžəm ške* (1a) and a somewhat simpler expression *škenže*[4] (1b). A demonstrative pronoun *tudo* 'that, the other' is used as a 3rd person pronominal, it cannot be locally bound (1c).

(1) a. Kažne ajdeme šken-ž-əm ške jörat-a.
every man self-P.3SG-ACC self love-PRS.3SG
'Every man likes himself.'

b. Kažne šken-ž-əm jörat-a.
everyone self-P.3SG-ACC like-PRS.3SG
'Everyone likes himself.'

c. Kažne$_i$ tud-əm$_{*i/k}$ jörat-a.
everyone he-ACC like-PRS.3SG
'Everyone likes him.'

Why would a language require special means to express reflexivity? In other words, what is the reason behind the prohibition to use a locally bound 3rd person pronominal as in (1c)? I assume that this limitation is a property of the computational system of human language (C_{HL}).

(2) Inability to Distinguish Indistinguishables (IDI) Principle: The C_{HL} cannot handle identical variables in the co-argument domain (after Reuland 2011:ch. 6).

It follows from the basic property of any computational system that it will be unable to distinguish indistinguishables in a given workspace, unless that space has a suitable coordinate system. This idea is already reflected in condition B of Reinhart & Reuland (1993): if the arguments of a predicate are coindexed, it is either lexically reflexive or one of its arguments is a self-anaphor.

The C_{HL} is unable to handle identicals unless the linguistic environment allows them to be distinguished as different occurrences. At LF (3b) the representation of binding contains two tokens of the variable *x* which instantiate one linguistic object. Following Chomsky (1995) and many

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[4] The form *škenže* is Nominative, but is only used in postpositional phrases. The default form is *ške* or *škeže*; bare *ške* is also used as an intensifier and a possessive reflexive, hence I use *škenže* to disambiguate.

others in the current literature, I assume that order is a PF property. Thus, it is unavailable at this point. Also there is not sufficient structure at LF, as only terms are visible at the C-I interface, but not intermediate projections (Chomsky 1995). With no order or hierarchy to distinguish between the occurences of the variable, they get identified – cf. (3b) after the arrow – which leads to indeterminacy as to how the two thematic roles of the verb are to be assigned. The transitive verb *admire* (4) has two θ-roles to assign and only one variable x they can be assigned to. Hence, ill-formedness ensues.

(3) a. Alice *admires* her.
    b. $[_{VP}\ x\ [_{V'}\ V\ x\ ]\ ] \rightarrow *[_{VP}\ V\ x\ ]$

(4) a. Alice $(\lambda x\ [_{admire\ [\theta 1,\ \theta 2]}\ x\ x\ ])$
    b. Alice $(\lambda x\ [_{admire\ [\theta 1,\ \theta 2]}\ x\ ])$
                        $\theta 1?\ \theta 2?$

There are two ways to prevent the IDI from causing reflexive relations to be inexpressible. One is a *detransitivization* operation on the predicate, for instance, by forming a composite θ-role – *bundling* in the sense of Reinhart & Siloni (2005). The other is the insertion of material (5a) that keeps the arguments distinct creating a *protecting* environment for the variable.

(5) a. ... [V x [x Morph]]
    b. $\lambda x\ .\ x\ f(x)$, where f maps x onto an element that can stand proxy for $\|x\|$.

The morphological realizations of $\|f(x)\|$ come in two types: some merely *license* a dependency by protecting the variable like anaphors in Malayalam and Peranakan Javanese, others also *enforce* it by encoding a dependency via movement like English *himself* (see the introduction for details and discussion).

To complete the theoretical toolkit I will be using when analysing Meadow Mari data, it should be noted that dependencies in narrow syntax can be established not only by a movement mechanism but also via Agree-based chains (Reuland 2011). The particular implementation of the latter option is based on Pesetsky & Torrego (2007). In this approach for an element to be visible for syntactic computation, it should have unvalued formal features (such as unvalued uninterpretable Tense). Unvalued features are valued by the Agree operation (subject to the standard conditions on chain formation of c-command and locality) with an element that is valued for these features.

In the Minimalist Program, checking structural Case exemplifies the most basic dependency, which is realized in a probe-goal relationship. The goal is an element that depends for a value on a c-commanding

element in the structure, a probe. If an argument requires structural Case, this makes it visible to a verbal head. If it is, it can enter further dependencies mediated by that head, for instance linking it up to the subject, via the inflectional system. The resulting feature sharing encodes the dependency in the syntax (for further details see the introduction).

In Meadow Mari, both *škenžəm ške* and *škenže* are able to protect the variable. They can be locally bound and hence prima facie look like reflexives. However, as it turns out when we have a closer look, in contrast to *škenžəm ške*, which essentially behaves as a classic anaphor in the sense of condition A of the Canonical Binding Theory (Chomsky 1981), *škenže* displays some unexpected properties – it allows split antecedents (section 2.1) as well as very long distance antecedents with dative experiencer verbs (section 2.2) in addition to allowing both local binding and "classical" long-distance binding.

2.1. *Split antecedents*

The pronoun *škenže* allows split antecedents, a property typical for pronominals and not for reflexive pronouns in the narrow sense (cf. Giorgi 1984):

(6) Pet'a$_i$ Jəvan-lan$_j$ kartəč'k-əšte šken-əšt-əm$_{i+j}$ onč'-əkt-en.
Petja Ivan-DAT photo-INESS self-P.3PL-ACC see-CAUS-PRT
'Petja showed to Ivan them(selves) on the photo.'

The pronoun *škenəštəm* in (6) carries a 3rd person plural possessive affix *–əšt–*, requiring a plural antecedent. This requirement is illustrated by the contrast between (7a) and (7b): in (7b), *škenəštəm* is marked for 3rd person plural, while the subject is in singular: the mismatch in features makes the sentence ill-formed, which indicates that, unlike standard pronominals, *škenəštəm* must have an antecedent in the sentence[5].

(7) a. Nuno šken-əšt-əm pətar-a-t.
they self-P.3PL-ACC harm-PRS-3PL
'They harm themselves.'
  b. *Tudo šken-əšt-əm pətar-a.
he self-P.3PL-ACC harm-PRS.3SG
Int.: 'He harms themselves.'

This property of the Meadow Mari pronoun *škenže* creates a terminological problem, as it makes it impossible to classify *škenže* as a

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[5] In Meadow Mari, in case of a split antecedent in 3rd person, both parts of the antecedent need to be linguistic, but in 1st person one antecedent can be extra-linguistic, cf. (34) in section 4.2.2.

reflexive proper[6]. I am going to call Meadow Mari *škenže* a semi-reflexive to reflect on its ability to license reflexivity combined with allowing a split antecedent.

2.2. *Very long distance antecedents with dative experiencer verbs*

Apart from allowing split antecedents, another puzzling property of the Meadow Mari semi-reflexive *škenže* is its binding domain. In general, *škenže* is bound within the first finite clause containing it, and allows long distance binding only when it is in an embedded infinitival clause.

(8) [Jəvan$_i$ šken-ž-əm$_{i/*m}$ jörat-a,]   Maša$_m$ šona.
    Ivan   self-P.3SG-ACC like-PRS.3SG Masha think-PRS.3SG
    'Masha thinks that Ivan likes himself / *her.'

In example (8), the semi-reflexive *škalanže* is the argument of the embedded finite clause and can be bound only by the local subject, but not by the subject of the matrix clause *Masha*. The boundary of an embedded infinitival clause is transparent for binding (9), so *škalanže* is ambiguous between the local and long-distance reading. But, in case of participial embedded clause (10), a long-distance reading is normally impeded and a pronominal *tudo* must be used instead.

(9) Üdər$_i$ rveze$_j$ de-č' [Ø$_j$ ška-lan-že$_{i/j}$ pört-əm əšt-aš]
    girl   boy   near-EL PRO self-DAT-P.3SG house-ACC make-INF
      jod-ən.
      build-PRT
    'The girl$_i$ asked the boy$_j$ to build herself/himself a house.'

(10) Pet'a$_i$ [Ø$_j$ *šken-ž-əm$_i$ / tud-əm$_i$ üž-še]   üdər$_j$
    Petja PRO self-P.3SG-ACC / he-ACC call-PTCP.ACT girl
      de-ne   kušt-en.
      near-INESS dance-PRT
    'Peter danced with the girl that invited him.'

In (10), the semi-reflexive *škenžəm* in the embedded participial clause can only be bound locally, by the PRO, and cannot be bound by the subject of the matrix clause *Pet'a*. However, if the embedded predicate happens to be a dative experiencer predicate, for instance *kelšaš* 'appeal to', the situation changes.

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[6] From the typological point of view this is not unique: quite a few pronouns standardly classified as reflexive in the languages across the world allow split antecedents, cf. a discussion of English and Japanese examples in Okada (1998).

(11) Pet'a$_i$ [ška-lan-že$_{i/?j}$ kelš-əše]   imn'-əm   Van'a-lan$_j$
    Petja self-DAT-P.3SG please-PTCP.ACT horse-ACC Vanja-DAT
      pölekl-en.
      give.as.a.present-PRT
    'Petja$_i$ gave to Vanja a horse that appealed to him$_i$.'

In the example (11), the semi-reflexive *škalanže* in the embedded participial clause in the context of the dative experiencer predicate can be bound by the matrix subject *Pet'a*. Furthermore, if the dative experiencer predicate happens to be in an embedded finite relative clause as in (12a), the semi-reflexive *škalanže* as its dative argument can still be bound by the matrix subject. That is completely illicit with any other type of the embedded predicate – cf. (12b).

(12) a. Pet'a$_i$ imn'e-m [kudo ška-lan-že$_{i/*j}$ kelš-en]   Van'a-lan$_j$
       Petja horse-ACC which self-DAT-P.3SG please-PRT Vanja-DAT
         pölekl-en.
         give.as.a.present-PRT
       'Petja gave to Vanja as a present a horse, which pleased him.'
    b. Petər$_i$ pört-əm [kud-əm   Van'u$_j$ ška-lan-že$_{*i/j}$
       Peter house-ACC which-ACC Ivan   self-DAT-P.3SG
         č'oŋ-a]   už-ən.
         build-PRS.3SG see-PRT
       'Peter saw the house, that Ivan builds for himself.'

So the question arises what is so special about embedded relative constructions with dative experiencer verbs that they allow the semi-reflexive *škenže* to be bound by the matrix subject skipping the local nominative subject.

3. The anaphoric system of Meadow Mari

The essential part of the morphological make-up of *škenže* in Meadow Mari is that it carries possessive markers, that agree in person and number with the antecedent.

3.1. *Possessive suffixes*

In Meadow Mari, the possessive is realized as a bound morpheme affixed to the head of the possessed nominal phrase (13, 14) and inflecting for number and person. In (13), the 3rd person singular possessive marker *–že* is attached to the possessed noun *pij* 'dog' referring to the possessor *poškudo* 'neighbour' and matching it in person and number. If the Genitive possessor position is not filled, as in (14), the possessive marker can either be bound or take a discourse antecedent. The word *joča-ž-əm* 'child-P.3SG-ACC' contains a

3rd person singular possessive marker, and can denote either a certain child known to the participants of the situation (disjoint reading) or a set of children (bound reading). Hence, I assume that possessive markers in Meadow Mari behave as possessive pronominals.

(13) poškud-ən   pij-že
     neighbour-GEN dog-P.3SG
     'neighbour's dog'

(14) Kažne_i   joča-ž_{i/k}-əm   jörat-a.
     everyone child-P.3SG-ACC   love-PRS.3SG
     'Everyone loves his child.'

The semi-reflexive *škenže* is reminiscent in its structure of possessive noun phrases. Table 1 presents a comparison of the declension of the semi-reflexive *škenže* and of the noun *üdər*, marked for 3rd person singular. In both cases the declension is identical, the slight difference in nominative is an instance of vowel harmony.

Table 1. Paradigms for *škenže* and *üdəržö* 'his/her girl, daughter'

Case	self-P.3SG	girl-P.3SG
NOM	šken-že	üdər-žö
GEN	šken-ž-ən	üdər-ž-ən
DAT	šken-žə-lan	üdər-žə-lan
	ška-lan-že	üdər-lan-že
	škan-že	
ACC	šken-ž-əm	üdər-ž-əm

Both *škenžəm ške* and *škenže* have a component that is fully specified for φ-features as they both bear possessive suffixes. Possessive markers are an essential part of the morphological composition of *škenže*. They share many traits with pronominals but lack the ability to be used deictically (for further details see Volkova 2014). For the sake of clarity I will assume that the interpretation of the possessive suffixes is exercised in the same way as the interpretation of pronominals, i.e. it is variable binding in the sense of Reinhart (1983) and (co-)reference. Possessive suffixes play an essential role in the way the anaphoric relationship between *škenže* and its antecedent is established.

3.2. *Škenžəm ške*: Complex reflexive

Škenžəm ške is comprised of two forms: the semi-reflexive *škenže* in the oblique case followed by a bare form *ške*. *Škenže* bears a possessive suffix

Table 2. The paradigm for *škenže*

Case	Person & Number					
	1SG	2SG	3SG	1PL	2PL	3PL
NOM	šken-em	šken-et	šken-že	šken-na	šken-da	šken-əšt
GEN	šken-em-ən	šken-et-ən	šken-ž-ən	šken-na-n	šken-da-n	šken-əšt-ən
	škem-ən	šken-d-ən				
DAT	šken-em-lan	šken-et-lan	šken-žə-lan	ška-lan-na	ška-lan-da	ška-lan-əšt
	ška-lan-em	ška-lan-et	ška-lan-že			
	škan-em	škan-et	škan-že	škan-na	šken-da	
ACC	šken-em-əm	šken-et-əm	šken-ž-əm	šken-na-m	šken-da-m	šken-əšt-əm
	ške-m-əm	šken-dəč-əm				

and a case marker that are added to the oblique stem *šken–/ška–/ške–* (c.f. table 2). The variety of forms is due to the variation between the local dialect and the literary norm, where shorter phonologically fused forms like *škem-ən* 'self.P.1SG-GEN' or *škan-em* 'self.DAT-P.1SG' are preferred. The order of the morphemes is mostly fixed to possessive suffix preceding the case marker, except in Dative where both orders are allowed also for nouns – cf. table 1.

The complex reflexive *škenžəm ške* is subject oriented, it cannot be bound by a non-subject coargument. In (15), the subject of the clause is the only possible antecedent. In (16a, b), the subject is in the 1st person singular, while the complex reflexive *škenžəm ške* bears 3rd person singular marker *–ž–*. This mismatch in person results in the ungram-maticality of the sentences; in both cases the (in)direct object of the verb, which is also the 3rd person singular, is not a possible antecedent.

(15) Ava-že$_i$ joča-ž-əm$_j$ (voštončəšto) ška-lan-že ške$_{i/*j}$
 Mother child-P.3SG-ACC (mirror.INESS) self-DAT-P.3SG self
 onč'-əkt-en.
 look-CAUS-PRT
 'The mother showed the child to herself / *himself.'

(16) a. $^?$*Məj joča-lan šken-ž-əm ške onč'-əkt-en-am.
    I child-DAT self-P.3SG-ACC self look-CAUS-PRT-1SG
   Int.: 'I showed to the child herself.'
 b. $^?$*Məj joča-m ška-lan-že ške onč'-əkt-en-am.
    I child-ACC self-DAT-P.1PL self look-CAUS-PRT-1SG
   Int.: 'I showed the child to herself.'

Meadow Mari *škenžəm ške* is always bound by a coargument.

(17) Üdər$_i$ rveze$_j$ de-č' [Ø$_j$ ška-lan-že ške$_{*i/j}$ pört-əm
    girl boy next-EL PRO self-DAT-P.3SG self house-ACC
    əšt-aš] jod-ən.
    make-INF ask-PRT
    'The girl asked the boy to build himself/*her a house.'

In (17), the complex reflexive is an argument of the embedded infinitival clause *škalanže ške pörtəm əštaš* 'to build oneself a house' and can be bound only by the PRO controlled by the NP *rveze* 'the boy'. The subject of the matrix clause *üdər* 'the girl' cannot serve as an antecedent for *škenžəm ške*.

Škenžəm ške cannot be used in non-coargument position, for instance in a postpositional phrase:

(18) *Ška-lan-že   ške$_i$ köra   tudo$_i$ P'et'a dene   sor-en.
    self-DAT-P.3SG self because.of he   Petja near-INESS argue-PRT
    'He had an argument with Peter because of himself.'

To sum up, the complex reflexive in Meadow Mari is close in its properties to a prototypical complex reflexive: it has to be bound in the coargument domain and does not allow a split antecedent.

3.3. *The semi-reflexive škenže*

The Meadow Mari semi-reflexive *škenže* can signal the covaluation of the arguments and adjuncts of a predicate with its subject (19), but it also allows split antecedents.

(19) P'et'a šken-ž-əm   jörat-a.
    Petja self-P.3SG-ACC like-PRS.3SG
    'Petja likes himself.'

The Meadow Mari semi-reflexive *škenže* is subject oriented (20a), unless there is a mismatch in person or number features. In example (20b), the semi-reflexive bears the 3rd person possessive suffix –*ž*–, thus requiring a 3rd person antecedent, while the subject of the sentence is the 1st person pronoun *məj* 'I'. In this case the 3rd person indirect object can serve as an antecedent of the semi-reflexive *škenže*[7].

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[7] In certain cases the semi-reflexive *škenže* can be bound by a non-subject coargument (prone to interspeaker variation), cf. (i). This can be a reflex of the fact that the verb *onč'əktaš* 'show' is a lexicalized causative of the verb *onč'aš* 'look', thus it can be analysed as a complex clause with two subjects (for a discussion of morphological causative in Meadow Mari see Letuchiy & Kolomatsky 2012).

(i) Jəvan$_i$ Petər-lan$_j$ šken-ž-əm$_{i/j}$ onč'-əkt-en.
    Ivan Peter-DAT self-P.3SG-ACC look-CAUS-PRT
    'Ivan showed to Peter himself.'

(20) a. Maša$_i$ Jəvan-lan$_j$ ške-ž$_{i/*j}$ nergen kalaskal-en.
     Masha Ivan-DAT self-P.3SG about talk-PRT
     'Masha talked to Ivan about herself / *himself.'

   b. Məj Jəvan-lan$_j$ ške-ž$_j$ nergen kalaskal-en-am.
     I   Ivan-DAT self-P.3SG about talk-PRT-1SG
     'I talked to Ivan about himself.'

As outlined in section 2.2, the semi-reflexive *škenže* must be bound within the finite clause. While embedded infinitival clauses are transparent for binding, the other types of non-finite embedded clauses in Meadow Mari are opaque. If *škenže* occupies a position inside an embedded participial clause (21), a converb (22) or a nominalization (23), it is always locally bound. Example (21) illustrates that *škenže* in the internal argument position of the embedded participial clause cannot be bound by the matrix subject.

(21) Jəvan$_i$ [šken-ž-əm$_{*i/j}$ pagal-əše]   jeŋ$_j$ nergen kutər-en.
     Ivan   self-P.3SG-ACC respect-PTCP.ACT man about talk-PRT
     'Ivan talked about a man who respects himself.'

In (22), *škenže* occupies the internal argument position of the converb *üžən* 'call'. It must be bound by the subject of the converb clause *Petük* 'Peter'. The long-distance binding by the matrix subject *tudo* 'he' is illicit.

(22) [Petük$_i$ šken-ž-əm$_{i/*j}$ üž-ən]   tudo$_j$ lišem-ən.
      Peter   self-P.3SG-ACC call-CONV he   approach-PRT
     'He came closer when Peter called himself.'

In (23), *škenže* is the internal argument of the nominalization clause and cannot be bound by a matrix subject.

(23) Jəvan$_i$ [$_{GenP}$ tunəktəš-əž-ən$_j$ [$_{NzP}$ šken-ž-əm$_{*i/j}$
     Ivan   teacher-P.3SG-GEN   self-P.3SG-ACC
     pagal-əm-əž-əm]]   pal-en.
     respect-NZR-P.3SG-ACC know-PRT
     'Ivan knows that the teacher respects himself.'

According to Serdobolskaya (2008), the subject of the nominalization clause *tunəktəšo* 'teacher' undergoes raising to the matrix clause and occupies the position of a genitive possessor. Thus, if *škenže* occurs in this position, it should be bound by the matrix subject. This prediction is borne out by our data (24). Example (24) illustrates that when *škenže* occupies the genitive possessor position of the nominalization clause it is bound by the matrix subject.

(24) Jəvan$_i$ [$_{GenP}$ šken-ž-ən$_i$ [$_{NzP}$ škol-əšto   tunem-m-əž-əm]]
     Ivan   self-P.3SG-GEN school-INESS study-NZR-P.3SG-ACC
       šarnalt-en.
       recall-PRT
     'Ivan recalled his studies at school.'

In this section I gave an overview of the anaphoric system employed in
Meadow Mari, which consists of a complex reflexive *škenžəm ške*, a semi-
reflexive *škenže* and a 3rd person pronominal *tudo*. The next sections will
guide us through the puzzles posed by *škenže* – its peculiar behaviour
with respect to split antecedents and dative experiencer verbs, and my
account of its nature.

The approach I adopt is largely inspired by Reuland (2011) who
deconstructs the macrouniversals of the Canonical Binding Theory
(Chomsky 1981). The behaviour of anaphors and pronominals gets an
explanation "in terms of their morphosyntactic feature composition, and
the way the computational system makes these features interact with the
linguistic environment" (Reuland 2011:183). For the concise overview
and discussion of the main notions of the theory I refer the reader to the
introduction to the present collection.

4. Split antecedents

4.1. *The complex reflexive škenžəm ške*

Given the behaviour of the complex reflexive *škenžəm ške* discussed in
section 3.2, it is fair to conclude that *škenžəm ške* enforces reflexivity.

One of the mechanisms discussed in Reuland (2011) is (covert) head
movement. It accounts for the binding constraints of English *himself*.
However, Meadow Mari *škenže* seems to be insensitive to island
environments unlike *himself* that becomes exempt for instance in
coordinate structures (25). In (26a), *škenəštəm ške* is a part of a
coordinate structure in the same vein as *herself* in (25). However, the
Mari *škenəštəm* must be bound within the finite clause – cf. (26b) – and
hence, cannot be interpreted as referring to the subject of the main clause
üdər-vlak 'girls'. That is why, unlike in English, the Coordinate Structure
Constraint in Meadow Mari[8] does not create exemption and hence does

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[8] The Coordinate Structure Constraint seems to work for MM in general, although the
left extraction is not visible:

(i) a. Maša mo-m   nal-ən? – Maša kniga-m da olma-m   nal-ən.
        Masha what-ACC buy-PRT – Masha book-ACC and apple-ACC buy-PRT
        'What did Masha buy? – Masha bought a book and an apple.'
    b. *Maša mo-m   da olma-m   nal-ən?
         Masha what-ACC and apple-ACC buy-PRT
        Int.: 'What did Masha buy [___ and an apple]?'

not supply independent evidence in support for the movement analysis of *ške*. In this respect Meadow Mari *škenžəm ške* is not so different from a complex reflexive like *zichzelf* in Dutch. *Zichzelf* is illicit in sentences like (25b) because *zich* being φ-feature deficient is subject to independent binding requirements, namely chain formation for φ-feature valuation, which is not the case for *him* in English (for discussion see Reuland 2011).

(25) a. *Mary$_i$ thought that the king invited herself$_i$ for tea.
     b. Mary$_i$ thought that the king invited [Jack and herself$_i$] for tea.

(26) a. *President Petr-əm   da   šken-əšt-əm ške ola-ške üž-ən
        president Peter-ACC and self-P.3PL-ACC self city-ILL invite-PRT
          manən üdər-vlak kuan-en-ət.
          that   girl-PL   rejoice-PRT-3PL
        Int.: 'The girls were happy that the president invited Peter and themselves to Yoshkar-Ola.'
     b. President$_p$ Petr-əm   da   šken-ž-əm$_{p/*m}$ ola-ške üž-ən
        president Peter-ACC and self-P.3SG-ACC city-ILL invite-PRT
          manən Maša$_m$ kuan-en.
          that   Masha rejoice-PRT
        'Masha was happy, that the president invited Peter and himself to Yoshkar-Ola.'

How does the complex reflexive *škenžəm ške* enforce reflexivity? The alley to explore here is a compositional interpretation procedure. The pronoun *ške* has been derived from a content noun with the meaning 'soul, spirit' (Paasonen 1909, Collinder 1955) through a process of grammaticalization. Hence, it can be analysed as a relational noun. Once grammaticalized the relational character remains: it can compose with the predicate as part of the interpretation procedure. The complex reflexive saturates one of the arguments of the verb and imposes an identity function (cf. the treatment of D-type reflexives by Déchaine & Wiltschko (2014), as well as Labelle (2008) for a similar treatment of French *lui-même*). The locality restriction on *škenžəm ške* in this case stems from the fact that 'soul' is an inalienably posssessed body-part noun. Reuland (2011) discusses the precise mechanism that forces local binding with inalienable nouns. It is based on the assumption that a body noun with minimal lexical content, which is part of a reflexive, adjoins/incorporates to the predicate (Reuland 2011:ch. 6). Incorporation results in a reflexive predicate, and this means that only the subject of the reflexive predicate is a possible antecedent of *škenžəm ške*.

(27) *Pet'a$_i$ Jəvan-lan$_j$ kartəč'k-əšte šken-əšt-əm ške$_{i+j}$ onč'-əkt-en.
       Petja Ivan-DAT photo-INESS self-P.3PL-ACC self   see-TR-PRT
     'Petja showed to Ivan them(selves) on the photo.'

In this section we discussed the complex reflexive *škenžəm ške*. It enforces reflexivity by incorporating onto the predicate. The complex reflexive can be bound only by the subject of the clause, it must be always bound within a coargument domain, and it does not allow split antecedents.

4.2. *The semi-reflexive škenže*

Let us recapitulate the main facts about Meadow Mari reflexives we have discussed so far. *Škenže* consists of a nominal stem *šken–* (derived from a word 'soul, spirit') and a possessive suffix, a bound morpheme expressing the number and person of the antecedent. *Škenže* must be bound within the first finite clause and is subject oriented. The possessive marker, which is a part of the morphological make-up of *škenže*, does not impose locality, nor the subject orientation, both of these constraints come from *šken–*.

The semi-reflexive *škenže* allows split antecedents (28), unlike the complex reflexive *škenžəm ške* (27).

(28) Pet'a$_i$ Jəvan-lan$_j$ (kartəč'k-əšte) šken-əšt-əm$_{i+j}$ onč'-əkt-en.
     Petja Ivan-DAT photo-INESS self-P.3PL-ACC see-TR-PRT
     'Petja showed to Ivan them(selves) (on the photo).'

In Meadow Mari, if the possessive marker matches the subject in features, the derivation succeeds. If the possessive marker and the subject clash in person (29a) or in number (29b), the derivation is cancelled.

(29) a. *Məj šken-ž-əm už-am.
       I self-P.3SG-ACC see-PRS.1SG
      Int: 'I saw himself.'
    b. *Tudo šken-əšt-əm pətar-a.
       he self-3PL-ACC harm-PRS.3SG
      Int.: 'He harms themselves.'

However, if the possessive marker is plural, and the subject is singular, yet there are other clausemates in the sentence, *škenže* can be interpreted as having split antecedents similarly to the pronominals or *themselves* in an exempt position (30).

(30) John$_i$ showed Mary$_j$ a picture of themselves$_{i+j}$.

How does *škenže* participate in licensing reflexivity, thus preventing the Inability to Distinguish Indistinguishables (IDI) effect? Given that *škenže* allows split antecedents and long-distance binding, it does not enforce reflexivity. Yet, there are syntactic constraints to its behaviour which means that there is more to it than just variable binding at LF. Following Reinhart's 2006 definition of variable binding (see introduction), the only

limitation it applies is the c-command relation between the antecedent and the bound element. Any other restriction should follow from some other factor.

In the structure of *škenže* the possessive affix is an un-detachable part of the expression. *Šken* is relational by assumption, therefore the possessive affix saturates one of its argument positions. This leaves one argument open. Since *šken* is grammaticalized, it cannot by itself close this argument, as lexical relational nouns like *spirit*, *soul* or *father* can do. This is illustrated in (31): *škenže* cannot be used as a head of a possessive phrase with a filled SpecPossP position (adding a modifier *poro* 'kind' analogous to Greek examples (Anagnostopoulou & Everaert 1999) does not improve the grammaticality of the sentence).

(31) *Jəvan Maša-n   (poro) šken-ž-əm   jörat-a.
     Ivan   Masha-GEN (kind) self-P.3SG-ACC love-PRS.3SG
     Int.: 'Ivan loves Masha's (kind) self.'

There is a proposal in the literature that makes the notion of referential deficiency concrete. Zwarts (2000) elaborates a proposal by Higgin-botham (1983) that nominals contain a set variable. Zwarts calls this the referential argument, and argues that this argument must be bound in order for a nominal argument to be referential. So, one may say that deficient nominals cannot themselves bind the referential argument in the sense of Zwarts (2000). Elaborating on this, if one has a relational noun, the referential argument provides one argument of the relation, the other is supplied by the specific concept the nominal expresses. Thus, due to the deficiency the binder of the referential argument has to be obtained from elsewhere, by Agree in our case.

Hence, *škenže* has the structure 'x soul-his', and the value of the other argument must be supplied. This means, that as a whole, *škenže* is deficient. This makes it similar to simplex anaphors like Norwegian *seg* in one relevant – and for present purposes sufficient – respect: the other argument is supplied by Agree which accounts for subject orientation of *škenže*.

4.2.1. *Interlude: long-distance bound Norwegian* seg

Norwegian *seg* allows long-distance binding (32a); the syntactic structure of the sentence is represented in (32b). The following analysis is adopted from Reuland (2011).

(32) a. Jon$_i$ bad oss [forsøke [å få deg [til å snakke pent
     Jon asked us (to).try to get you to talk   nicely
     om   seg$_i$]]].
     about SE
     'Jon asked us to try to get you to talk nicely about him.
     (Hellan 1988)
   b. [$_{S0}$ $\varnothing_{C0}$ [Jon$_i$ T$_0$ bad$_{V0}$ oss [$_{S1}$ $\varnothing_{C1}$ [PRO T$_1$ forsøke$_{V1}$
               Jon   asked us   PRO (to) try
     [$_{S2}$ å$_{C2}$ PRO T$_2$ få$_{V2}$ deg [$_{S3}$ til$_{C3}$ PRO T$_3$ å snakke$_{V3}$
      for PRO   get you   to   PRO   to talk
     pent om   seg$_i$]]]]]].
     nicely about SE
     'Jon asked us to try to get you to talk nicely about him.
     (Reuland 2011:306)

The possibility of long-distance binding of Norwegian *seg* in the infinitival clauses can be accounted as a result of chain formation between *seg* and a higher subject via the left periphery of the infinitival clause (Reuland 2011). In the cartographic approach (see among others Rizzi 1997, Bianchi 2000, 2001), the C-system has an internal structure providing the links between the lower and the higher clause. Specifically, the C-system contains at least one element, C^{Fin} representing the feature +/–finite and, we will assume, also an element C^T representing the feature +/–Tense. C^{Fin} and C^T can be considered to be two sides of the same coin, just like Agreement and Tense as components of T$_{AGR}$.

We may treat C^{Fin} and C^T as separate heads, with the proviso that they are equidistant with respect to T. The interplay between C^{Fin} and C^T serves as a switch providing the optionality in interpretation of *seg* in infinitival clauses (Reuland 2011). If C^{Fin} has the value +finite, it will value T$_{AGR}$, and hence SE if it is added to the T–SE chain. Consequently, economy – preferring SE to be valued as early as possible – will leave no choice, and the C^{Fin}–T–SE chain will be formed. Thus, the local subject is the obligatory binder as required.

In the infinitival case, however, both C^{Fin} and C^T are deficient (represented as C^{-Fin} and C^{-T}). It is C^{-Fin} that is involved in transmitting control (Bianchi 2000, 2001). At the point where the elements from the C-system have to be merged, the controller has not yet been merged. Hence at this point there is no economy preference as to whether the T–SE chain is linked to C^{-Fin} or to C^{-T}. If a C^{-Fin}–T–SE chain is formed, SE will be subsequently valued by the controller when it is merged in the matrix clause (or the derivation will be cancelled if the controller that is merged is not 3rd person).

Alternatively, nothing prevents the T–SE chain from being linked to C^{-T}. If so, a C^{-T}–T–SE chain is formed. Within C^{-T}–T–SE, SE does not

receive a value. Hence it has to wait for a value until it can access a higher source. If the higher clause is finite, SE will end up being valued by the matrix subject.

4.2.2. *Back to Meadow Mari*

The same procedure of chain formation as described for non-local binding of Norwegian *seg* (Reuland 2011) also derives local (due to its complexity) and non-local binding of *škenže* including the cap provided by the first finite AGR. Note, that although the possessive marker *–že* would by itself put no constraints on binding, it is the *šken–* part that does, much like in *John lost his book* the pronoun *his* can be anybody, but in *John lost his soul* it can only be John. The value of *his* gets restricted by the interpretive constraints imposed by the head noun. Once the open argument of *šken* is fixed, it is the interpretive constraints imposed by *šken* that determine what freedom there is for *–že*.

Šken defines a proxy-relation, and thus a restriction on the domain. The plurality is treated as a proxy of a singularity. If the possessive marker on the semi-reflexive and the supplier of the value for x in *šken* fully match in features, the derivation converges. If there is a partial mismatch – the subject is singular and the possessive marker is plural, but they match in person – I only have to assume that the value of x restricts the domain to pluralities that are sufficiently salient and containing the (denotation of the) associated subject.

This approach allows to account for the elusive instances of the inclusive reference observed in Meadow Mari. As suggested by example (29b) repeated here as (33a) *škenže* does not allow inclusive reference in third person. However, at closer inspection it turns out to be subject to inter-speaker variation – cf. (33b). If the plural possessive suffix in (33) takes as its value a plurality of people associated with the value of x, it is indeed pragmatically difficult to construe such a plurality for the demonstrative pronoun *tudo* 'he, this one' or for a quantifier *kažne* 'everyone'. The situation is improved if the antecedent is referential as in (33b).

(33) a. *Tudo / *Kažne   šken-əšt-əm   pətar-a.
       he / everyone self-3PL-ACC harm-PRS.3SG
    Int.: 'He / Everyone harms themselves.'
  b. [?+]Vasilij šken-əšt-əm jörat-a.
      Vasilij self-3PL-ACC like-PRS.3SG
    'Vasilij likes themselves (= himself and his close ones).'

In contrast, inclusive reference is readily available in the first person (34). It might be facilitated by the fact that the meaning of the first person plural (unlike for the third person) is 'I plus some other people'.

(34) Məj šken-na-m   vurs-em.
     I   self-1PL-ACC scold-PRS.1SG
     'I scold at ourselves.'

Let us look at the long-distance use of *škenəštəm* in the embedded infinitival clause. In (35), the possible interpretations for *škenəštəm* are Ivan + a group of people or Masha + Ivan; Masha + a group of people is not that good. I use 'kin' to denote the group of people associated with a given participant. My approach allows to account for this type of interpretations as well.

(35) Maša$_m$ Jəvan-əm$_i$ [PRO$_i$ šken-əšt-əm$_{i+kin/m+i/??m+kin}$ mokt-aš]
     Masha Ivan-ACC   PRO self-P.3PL-ACC   praise-INF
       jod-ən.
       ask-PRT
     'Masha asked Ivan to praise them(selves).'

It is not possible for *škenže* to have split antecedents across a finite clause boundary. In (36) the form *škenəštəm* requires an antecedent in plural. We also know that *škenže* must be bound within a finite clause. A plural individual that could serve as an antecedent for *škenəštəm* cannot be formed within the immediate finite clause which the semi-reflexive is part of (as happens in (28)), hence it is likely that the sentence would be illicit. And indeed it is.

(36) [*Vas'a šken-əšt-əm$_{i+m/i+v}$ už-ən   manən] Jəvan$_i$ Maša-lan$_j$
     Vasja self-P.3PL-ACC   see-PRT that   Ivan   Masha-DAT
       ojl-en.
       tell-PRT
     'Int.: Ivan told Masha that Vasja saw them(selves).'

To sum up, due to the relational nature and the lexical deficiency of the *šken* part, the structure of the Meadow Mari semi-reflexive *škenže* contains an open argument. The value for this argument is supplied by Agree, therefore its domain is determined by the first finite AGR.

The fact that infinitival clauses in Meadow Mari are transparent for binding, but participial clauses and nominalizations are not should ideally follow from the same set of assumptions. There is no reason to assume that participial clauses and nominalizations in Meadow Mari have a left periphery containing C^{Fin} or C^T attracting the chain head. Hence, the semi-reflexive *škenže* cannot be long-distance bound in these types of embedded clauses.

In this section I discussed the ability of the semi-reflexive *škenže* to take split antecedents and explored its quirks. I further provided an account of why *škenže* licenses reflexivity, but does not enforce it. In the next section

I will discuss the use of *škenže* as an argument of a dative experiencer predicate embedded in a relative clause which provides another argument in favour of the proposed analysis.

5. Dative experiencer predicates

5.1. *Outline of the problem*

When *škenže* serves as the dative argument of the dative experiencer predicate in an embedded participial or a finite relative clause, it can be bound only by an argument of the matrix predicate unlike if it is an argument of an agent-theme verb, as discussed in section 2.2.

Examples in (37, 38) show the use of *škenže* with the dative experiencer predicate in the embedded participial clause and the finite relative clause respectively. The preferable binder is the subject of the matrix clause (37a, 38a), but if the feature specification of possessive suffix on *škenže* does not match the one of the subject, the pronoun can be bound by the indirect object (37b, 38b) or have split antecedents (37c, 38c). In (37c, 38c), both the semi-reflexive *škenže* and its coargument bear a plural feature, unlike any of the arguments of the matrix clause, yet, it cannot force *škenže* to take a local antecedent, instead, it is interpreted as having split antecedents.

(37) a. Ava-že$_i$ Jəvan-əm$_j$ [ška-lan-že$_{i/?j/*k}$ kelš-əše]
         mother-P.3SG Ivan-ACC   self-DAT-P.3PL appeal.to-PTCP.ACT
           üdər$_k$ de-ne   pal-əm-əm   əšt-en.
           girl   near-INESS know-NZR-ACC do-PRT
         'The mother introduced Ivan to the girl that appealed to her.'
      b. Ača-že$_i$ erge-vlak-š-əm$_j$ [ška-lan-əšt$_j$ kelš-əše]
         father-P.3SG son-PL-P.3SG-ACC self-DAT-P.3PL appeal.to-PTCP.ACT
           üdər de-ne   pal-əm-əm   əšt-en.
           girl near-INESS know-NZR-ACC do-PRT
         'The father introduced his sons to the girl that appealed to them.'
      c. Ava-že$_i$ Jəvan-əm$_j$ [ška-lan-əšt$_{i+j/i+kin/*k}$ kelš-əše]
         mother-P.3SG Ivan-ACC   self-DAT-P.3PL   appeal.to-PTCP.ACT
           üdər-vlak$_k$ de-ne   pal-əm-əm   əšt-en.
           girl-PL   near-INESS know-NZR-ACC do-PRT
         'The mother introduced Ivan to the girls that appealed to them (mother + Ivan / mother + the family).'

(38) a. Jəvan_i ergə-ž-əm_j üdər_d de-ne pal-əm-əm əšt-en
     Ivan son-P.3SG-ACC girl near-INESS know-NZR-ACC do-PRT
      [kudo ška-lan-že_{i/*j/*d} kelš-en].
       which self-DAT-P.3SG appeal.to-PRT
     'Ivan introduced his son to a girl who appealed to him.'

   b. Jəvan_i erge-vlak-š-əm_j üdər_k de-ne pal-əm-əm əšt-en
     Ivan son-PL-P.3SG-ACC girl near-INESS know-NZR-ACC do-PRT
      [kudo ška-lan-əšt_{j+family/*k} kelš-en].
       which self-DAT-P.3PL appeal.to-PRT
     'Ivan introduced his sons to a girl who appealed to them.'

   c. Jəvan_i ergə-ž-əm_j üdər-vlak_k de-ne pal-əm-əm
     Ivan son-P.3SG-ACC girl-PL near-INESS know-NZR-ACC
      əšt-en [kudo ška-lan-əšt_{i+j/*k} kelš-en-ət].
       do-PRT which self-DAT-P.3PL appeal.to-PRT-3PL
     'Ivan introduced his son to the girls who appealed to them.'

To emphasize, the coargument of *škenže* cannot bind it in this environment (although it can in a simple clause – cf. (39)).

(39) Maša ška-lan-že kelš-a.
     Masha self-DAT-P.3SG appeal.to-PRS.3SG
     'Masha appeals to herself.'

If *škenže* is the argument of an agent-theme verb in the participial clause or a finite relative clause, it must be bound locally. In (40a), *škenže* is the argument of the verb *onč'əktaš* 'show' in the embedded participial clause. It is bound by the local subject, the PRO. In the context of an agent-theme verb, only the anaphoric pronoun *tudo* can be bound by the matrix subject (40b).

(40) a. Jəvan_i [Ø_j ška-lan-že_{*i/j} ola-m onč'əkt-əšo] jeŋ-lan_j
     Ivan   PRO self-DAT-P.3SG city-ACC show-PTCP.ACT man-DAT
      sər-en.
       be.angry-PRT
     'Ivan was angry at the man, who showed the city to himself.'

   b. Jəvan_i [tud-lan_{i/k} ola-m onč'əkt-əšo] jeŋ-lan_j sər-en.
     Ivan he-DAT city-ACC show-PTCP.ACT man-DAT be.angry-PRT
     'Ivan was angry at the man, who showed him the city.'

In example (41), the dative form *škalanže* is an argument of an agent-theme verb *nalaš* 'buy' in the embedded finite relative clause. (41a) shows that in this environment, *škalanže* must be locally bound. To refer to the arguments of the matrix clause the pronoun *tudo* should be used (41b).

(41) a. Jəvan$_i$ Petr-əm$_p$ üdər$_u$ de-ne   pal-əm-əm   əšten
       Ivan   Peter-ACC girl   near-INESS introduce-NZR-ACC do-PRT
       [kudo$_u$ ška-lan-že$_{u/*p/*i}$ teŋgeč'e   kniga-m   nal-ən].
        which self-DAT-P.3SG   yesterday book-ACC buy-PRT
       'Ivan introduced Peter to a girl, who bought herself a book
       yesterday.'

    b. Jəvan$_i$ Petr-əm$_p$ üdər$_u$ de-ne   pal-əm-əm   əšten
       Ivan   Peter-ACC girl   near-INESS introduce-NZR-ACC do-PRT
       [kudo$_u$ tud-lan$_{p/i/*u}$ teŋgeč'e   kniga-m   nal-ən].
        which he-DAT   yesterday book-ACC buy-PRT
       'Ivan introduced Peter to a girl, who bought him a book
       yesterday.'

The complex reflexive *škenžəm ške* as an argument of a dative experiencer predicate does not alter its binding properties. In (42, 43), *škenžəm ške* serves as an argument of a dative experiencer predicate in an embedded participial clause and a finite relative clause respectively. In both cases, it must be bound by a coargument.

(42) Ava-že$_i$ Jəvan-əm$_j$ [∅$_k$ ška-lan-že   ške$_{k/*i/*j}$
     mother-P.3SG Ivan-ACC   PRO self-DAT-P.3PL self
       kelš-əše]   üdər$_k$ de-ne   pal-əm-əm   əšt-en.
       appeal.to-PTCP.ACT girl   near-INESS know-NZR-ACC do-PRT
     'The mother introduced Ivan to the girl that appealed to herself.'

(43) Jəvan$_i$ ergə-ž-əm$_j$ üdər$_d$ de-ne   pal-əm-əm   əšt-en
     Ivan   son-P.3SG-ACC girl   near-INESS know-NZR-ACC do-PRT
       [kudo ška-lan-že   ške$_{d/*i}$ kelš-en].
        which self-DAT-P.3SG self   appeal.to-PRT
     'Ivan introduced his son to a girl that appealed to herself.'

Going back to the properties of *škenže*, as I mentioned in the comments to examples (37, 38), *škenže* as a dative argument of a dative experiencer predicate in an embedded relative clause modifying an indirect object of the matrix clause can never be bound by its coargument. Yet, if the embedded relative clause modifies the a subject, it can be.

In (44), *škenže* is an argument of a participial clause (44a) and a finite relative clause (44b), which modify the subject of the matrix clause *üdər* 'girl'. Here it looks as if *škenže* is locally bound, which is to be expected as both the participial clause boundary and finite clause boundary are opaque for narrow syntax binding in Meadow Mari.

(44) a. [∅ₖ ška-lan-žeₖ/*ᵢ kelš-əše]   üdərₖ Jəvanᵢ dene
         PRO self-DAT-P.3SG appeal.to-PTCP.ACT girl Ivan near-INESS
         pal-əm-əm   lij-en.
         know-NZR-ACC be-PRT
         'The girl who appealed to herself met Ivan.'
     b. Üdərₖ [kudoₖ ška-lan-žeₖ/*ᵢ kelš-a]   Jəvan-əmᵢ
        girl   who   self-DAT-P.3SG appeal.to-PRS.3SG Ivan-ACC
        už-ən.
        see-PRT
        'The girl who liked herself saw Ivan.'

Further, it turns out that *škenže* can be also bound by a much more distant antecedent than the subject of the immediately dominating finite clause. In (45), the context in focus is further embedded under a predicate of speech. It turns out that in this case the subject of the predicate of speech can also serve as an antecedent to *škenže*. That pertains also to the case like (44), where *škenže* seemed to be locally bound – cf. (46).[9]

(45) a. [Ava-žeᵢ   Jəvan-əmⱼ [ška-lan-žeᵢ/ₚ/?ⱼ kelš-əše]
         mother-P.3SG Ivan-ACC   self-DAT-P.3SG appeal.to-PTCP.ACT
         üdərₖ de-ne   pal-əm-əm   əšt-en manən] Pötr ojl-en.
         girl near-INESS know-NZR-ACC do-PRT that   Pjotr say-PRT
         'Peter said that the mother introduced Ivan to the girl that appealed to her/him.'
     b. [Ava-žeᵢ   Jəvan-əmⱼ üdərₖ de-ne   pal-əm-əm   əšt-en
        mother-P.3SG Ivan-ACC girl near-INESS know-NZR-ACC do-PRT
        [kudo ška-lan-žeₚ/ᵢ/?ⱼ kelš-en]   manən] Pötrₚ ojl-en.
         which self-DAT-P.3SG appeal.to-PRT that   Pjotr say-PRT
        'Peter said that the mother introduced Ivan to the girl that appealed to her/him.'

(46) a. [[Ška-lan-žeₖ/ₚ/*ᵢ kelš-əše]   üdərₖ Jəvan-əmᵢ už-ən
          self-DAT-P.3SG appeal.to-PTCP.ACT girl Ivan-ACC see-PRT
          manən] Petrₚ ojl-en.
          that   Peter say-PRT
         'Peter said that the girl who appealed to herself/him saw Ivan.'
     b. [Üdərₖ [kudo ška-lan-žeₖ/ₚ/*ᵢ kelš-a]   Jəvan-əmᵢ
        girl   who   self-DAT-P.3SG appeal.to-PRS.3SG Ivan-ACC
        už-ən   manən] Petrₚ ojl-en.
        see-PRT that   Peter say-PRT
        'Peter said that the girl who liked herself/him saw Ivan.'

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[9] Some speakers do not share the judgements in (45, 46).

However, this property of *škenže* does not apply in the similar contexts with agent-theme verbs. In (47), *škenže* serves as an argument of an agent-theme verb *nalaš* 'buy' in an embedded relative clause, and the entire sentence is further embedded under a predicate of speech. In both (47a) and (47b), *škenže* must be locally bound.

(47) a. [Jəvan$_i$ Petr-əm$_p$ [teŋgeč'e ška-lan-že$_{k/*i/*v/*p}$ kniga-m
        Ivan   Peter-ACC yesterday self-DAT-P.3SG   book-ACC
        nal-əše]   üdər$_k$ de-ne   pal-əm-əm   əšt-en]
        buy-PTCP.ACT girl   near-INESS know-NZR-ACC do-PRT
        Vas'a$_v$ ojl-en.
        Vasja   say-PRT
     'Vasja said that Ivan introduced Peter to a girl who bought
     herself a book yesterday.'
   b. [Jəvan$_i$ Petr-əm$_p$ üdər$_k$ de-ne   pal-əm-əm   əšt-en
        Ivan   Peter-ACC girl   near-INESS know-NZR-ACC do-PRT
        [kudo teŋgeč'e ška-lan-že$_{k/*i/*v/*p}$ kniga-m   nal-ən]
        which yesterday self-DAT-P.3SG   book-ACC buy-PRT
        manən] Vas'a$_v$ ojl-en.
        that   Vasja   say-PRT
     'Vasja said that Ivan introduced Peter to a girl who bought
     herself a book yesterday.'

To summarize, it appears that if *škenže* is an argument of a dative experiencer predicate in an embedded relative clause, it behaves as a logophor. The following section will provide an account for that.

5.2. Discussion

The atypical behaviour of the semi-reflexive *škenže* has been observed with the dative experiencer predicates in Meadow Mari: *kelšaš* 'appeal to', and *č'uč'aš* 'seem, appear to'.

(48) Məlanem futbol   kelš-a.
     I.DAT   football appeal.to-PRS.3SG
     'I like football.'

These verbs mark the experiencer with dative, and the theme (stimulus) with nominative. The nominative theme serves as a grammatical subject of the sentence. Dative experiencers in Meadow Mari do not behave as quirky subjects of the strong Icelandic type. First, the relativization strategy with the active participle ending with *–šo* relativizes only the subject of the predicate, and as can be seen in (37), it is always the nominative argument. Second, it is the nominative argument of the dative experiencer verb that controls the PRO in the conjunction reduction constructions, unlike in Icelandic.

In Icelandic (50), the nominative argument of the intransitive predicate can control the quirky dative PRO of the conjoint dative experiencer predicate. In Meadow Mari, a sentence structured like that would be illicit. Example (49a) shows that the nominative argument *Jəvan* can only control the nominative PRO; the dative argument has to be expressed overtly. In a reverse case in (49b) it is only the nominative argument of the dative experiencer predicate that can control the nominative PRO of the conjoint intransitive predicate.

(49) a. Jəvan šərgəž-eš da Maša-*(lan) kelš-a.
       Ivan   smile-PRS.3SG and Masha-*(DAT) appeal.to-PRS.3SG
       'Ivan smiles and appeals to Masha.'

     b. Maša_i Pet'a-lan_j kelš-a da PRO_i/*j šərgəž-eš.
        Masha Peter-DAT appeal.to-PRS.3SG and PRO smile-PRS.3SG
        'Masha appeals to Peter, and she smiles.'

(50) Icelandic
     Hún   var syfjuð og (henni)   leiddist bókin.
     she.NOM was sleepy and (she.DAT) bored book.the.NOM
     'She was sleepy and found the book boring.' (Sigurðsson 2004:142)

Following Belletti & Rizzi (1988), the psych predicates of the *appeal to*-type have an unaccusative derivation, assigning inherent case to the experiencer argument VP-internally. The experiencer projects into a higher VP-internal position than the theme, but the latter can undergo a subsequent A-movement. The intuition that the dative experiencer verb case-marks the experiencer but fails to case-mark the target, which therefore has to move to a subject position, is also shared by Pesetsky (1995). Given the nature of dative experiencer predicates, it follows that *škenže* can be bound by the theme once the latter undergoes A-movement (like in simple clauses). So, the following distinction is crucial for the analysis: I assume that in modifying relative clauses, the theme does not move into the T-domain, whereas in complement and root clauses it does. This idea is based on the hypothesis that the left periphery in relative clauses is 'weaker' than in complement clauses, hence T is weaker, thus, there is no movement due to EPP feature in the former, whereas in the latter there is.

The hypothesis about the deficiency of T in relative clauses gains some support from independent sources. For instance, Khomitsevich (2007) discusses that relative clauses do not participate in the sequence of tenses. Another argument that the crux of the matter is the nature of embedded relative clauses comes from the behaviour of *škenže* as an argument of a dative experiencer predicate in a nominalization clause.

(51) Jəvan_i Maša-n_m   ška-lan-že_{m/*i} kelš-əm-əž-əm
     Ivan   Masha-GEN self-DAT-P.3SG appeal.to-NZR-P.3SG-ACC
       pal-a.
       know-PRS.3SG
     'Ivan knows that Masha appeals to herself.'

Example (51) shows that *škalanže* can be bound only locally – by the subject of the nominalization clause *Maša-n/Masha-GEN*.

To recapitulate, we have the following converging facts: in relative clauses with dative experiencer verbs unlike with agent-theme verbs *škenže* occupies a relatively high position with respect to its envisaged binder due to the absence of the EPP feature on T. The EPP feature serves as a movement trigger for the theme argument to the subject position. The absence of the EPP feature is attributed to the weakness of T node in relative clauses. As discussed in the previous section, binding restrictions on *škenže* are defined by the Agree-mediated relation between the unsaturated argument position of *šken* on the one hand and the SpecTP on the other. Given that SpecTP is not filled, no such link between *šken* and the low theme argument is created, hence no privileged local binding relation mediated by Agree is established. Being in a syntactic environment that disallows binding via Agree, *škenže* as an argument of a dative experiencer predicate in an embedded relative clause behaves as an exempt anaphor in the sense of Pollard & Sag (1992). Its interpretation in this case is determined by further properties of the environment (including discourse) in which it occurs. The relation to a higher subject is established by variable binding in logical syntax.

In this section I discussed the behaviour of the semi-reflexive *škenže* in the context of dative experiencer predicates in embedded relative clauses. I argue that the peculiar behaviour of *škenže* in this context boils down to the fact that the SpecTP of the embedded relative clause is not filled due to the absence of the EPP feature on T. Given the analysis provided in section 4, it follows that no privileged local binding relation mediated by Agree can be established. This prediction is borne out, *škenže* behaves as anaphor in an exempt position, and can be bound by very distant antecedents.

6. Summary

The present paper discussed two puzzles Meadow Mari poses for binding theories: the ability of the semi-reflexive *škenže* to take split antecedents and the availability of very long distance antecedents for *škenže* as an argument of dative experiencer predicates in a relative clause. I also gave an account of the nominal reflexive strategies in Meadow Mari. Apart from the semi-reflexive *škenže*, the language also employs a complex

reflexive *škenžəm ške*, to which the peculiarities of *škenže* do not pertain. In section 4, I discussed various configurations of split antecedents and came to the conclusion that one co-antecedent of the possessive marker must be the supplier of the value for the *x* in *šken* mediated by Agree. I further provided an account for the ability of *škenže* to license, but not enforce reflexivity. In section 5, I discussed the use of *škenže* with dative experiencer verbs, and my account of its nature.

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