

Licensing Reflexivity:

Unity and variation among selected

Uralic languages

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Unity and variation among selected
Uralic languages

Reflexiviteit gelicentieerd:
Eenheid en variatie binnen een groep
Oeralische talen
(met een samenvatting in het Nederlands)

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te Moskou, Rusland

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To my incredible family

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CHAPTER 1

Introduction

This dissertation analyses reflexivity strategies in five minority Uralic languages spoken in the Russian Federation: Meadow Mari, Komi-Zyrian, Khanty, Bersermyan Udmurt, and Erzya. As a toolkit for the analysis I use a minimalist approach to binding along the lines of Reuland (2011). In this chapter I will start by discussing the requirements for a binding theory and how various proposals in the field fare in that respect. Furthermore, I will outline the basics of the approach I adopt in this dissertation that are relevant for the discussion of the language data in the following chapters. The chapter is concluded with the puzzles that Finno-Ugric languages pose for the binding theories and the outline of the present study.

1.1 Towards an adequate binding theory

The last thirty years since the publication of Chomsky's Canonical Binding Theory (CBT, Chomsky 1981) were marked with massive cross-linguistic research on binding patterns and revealed many puzzles and huge variation in the strategies employed, which have posed challenges to the main assumptions of the Principles and Parameters model as well as of the Minimalist framework (Chomsky 1995), namely the status of universal grammar. The large scale of cross-linguistic variation made some linguists opt in favour of data-driven surface based approaches, that abandon the idea of unity in diversity – cf. Evans and Levinson (2009); Frank et al. (2012). These authors claim that language is a bio-cultural phenomenon, and its manifestations can be as diverse as hu-

man culture can be diverse. In order to meet this challenge, a binding theory is called for that explains cross-linguistic variation and highlights the unity.

The *prima facie* impression is that languages demonstrate immense cross-linguistic variation in the expression of reflexivity: self-reflexives, bodypart reflexives, simplex reflexives, clitics, verbal reflexives, doubled pronominals, simple pronominals etc. It is hard to reconcile such diversity in form with macro-universals as in the CBT. Furthermore, the elements dedicated to expressing reflexive relations show great variation in their functions and in their binding potential. In many languages self-reflexives and bodypart reflexives must be locally bound, but this requirement is in no way universal; conversely, simple pronominals are expected to be locally free. Simplex reflexives and clitics can be long-distance bound and go beyond expressing reflexivity. The biolinguistic approach suggests that, in language research, under the diversity of expression we have to look for commonalities reflecting our shared human nature. Hence, resolving the issue requires:

- detailed investigation of ‘problematic’ cases;
- breakdown into basic factors:
 - What is contributed by general mechanisms?
 - What is contributed by language-particular morpho-syntactic properties?
 - What is contributed by pragmatics and other factors of ‘use’?

Thus, what are the properties required of a binding theory, in order that it can serve as a navigation system in the sea of unstructured language data? My list includes the following points:

1. cross-linguistic adequacy: The theory should have an apparatus for easily accounting for cross-linguistic variation in grammar. As I am dealing with languages with morphologically complex reflexive strategies, it was particularly important for me that morphosyntactic features play a role.
2. minimalist in spirit: The theory should avoid stipulating binding properties. In line with Chomsky (1995) it should obey the inclusiveness condition and not make use of indices. It is preferable that conditions on binding are reduced to a more general grammatical operation – given the minimalist framework, Merge or Agree – which would lead to the simplification of the grammar.
3. cognitive background: Within the biolinguistic approach, it is an essential condition for adequacy that a theory has something to say about the properties of the computational system of human language (CHL).

Testelecs and Toldova (1998), in a study based on a survey of anaphora in East Caucasian languages, proposed a hierarchy of the positions a reflexive bound by the (matrix) subject can occupy in a sentence. The hierarchy presented in (1) predicts that if a language uses dedicated reflexives for indirect objects, then it will use them for direct objects as well, but not vice versa.

- (1) $DO_{2\text{place}} > DO_{\text{ditrans}} > \text{Coargument} > \text{Non-coarg.} > DP_{\text{non-fin}} > DP_{\text{fin}}$

This is an interesting generalization. My perspective here is that an adequate binding theory should be able to derive such generalizations.

1.2 The alternatives

A number of competing accounts of binding theory have been proposed recently. Clearly, an attempt to do full justice to each of them would carry us beyond the scope of this dissertation. Therefore I will limit myself to sketching the main considerations that led me to pursue the option I selected.

They all explore the idea of competition from various angles. Levinson (2000) suggests a reduction of the CBT to a number of pragmatic principles. He builds his account on the Grice's notion of a generalized conversational implicature which "captures our intuitions about a preferred or normal interpretation" (Levinson 2000: 11). Levinson assumes that it is normal or prototypical that an agent of a transitive predicate acts upon some entity distinct from itself. Given that, the I-principle which encourages an interpretation to the stereotype, predicts the disjoint interpretation of the arguments of a transitive sentence (principle B of the CBT). The M-principle declares that an abnormal, nonstereotypical situation should be indicated by using marked expressions contrasting with those used for corresponding normal, stereotypical situations. Furthermore, the Q-principle calls for the use of the informationally strongest paradigmatic alternate that is consistent with the facts and, thus, in addition to the I- and M-principles "will suggest that if a less informative, less restrictive expression (like a pronoun) is used just where a contrastive more informative expression (like a reflexive) could have been used instead, then the reading that would have come about through the use of the more informative expression is not intended" (Levinson 2000: 271).

From my point of view, this theory does not fare well when it comes to cross-linguistic adequacy. It predicts that the members of the anaphoric system in a given language should be in complementary distribution according to their markedness or complexity. This is often not the case and only clouds the research path when it comes to description of less-studied languages. Farmer and Harnish (1987) run into a similar problem with their Disjoint Reference Presumption ("the arguments of a predicate are intended to be disjoint, unless marked otherwise" (p. 557)) except they do not provide any reasoning for this presumption. Levinson (2000) derives it from the prototypicality of

action, without explaining why the disjointness of arguments of a given predicate would be normal. Further, it is not clear how his theory would extend to subject-experiencer verbs like *admire* or *know* which do not denote actions.

Schlenker (2005) proposes a purely semantic binding theory. He posits a few constraints on the construction of sequences of evaluation: Non-Redundancy, the Treatment of R-expressions and the Treatment of Non-Demonstrative Pronouns and shows how these suffice to derive the conditions on binding.

- (2) a. *Non-Redundancy*
No object may occur twice in the same sequence of evaluation.
- b. *Treatment of R-expressions*
When an R-expression (proper name, definite description, or demonstrative pronoun) is processed, its denotation is added at the end of the register (i.e. at the end of the sequence of evaluation).
- c. *Treatment of Non-Demonstrative Pronouns*
When a non-demonstrative pronoun is processed, some element of the register is recovered and moved to the end of the register.

Non-Redundancy is taken to be a general cognitive principle. Together with the Treatment of Non-Demonstrative Pronouns, Non-Redundancy captures the Condition B effects. Condition A effects are accounted for by analyzing reflexives as operators that reduce the arity of a predicate they apply to.

The drawback of the theory proposed by Schlenker (2005) is that the proposed constraints are not independently motivated. It also does not fare well when it comes to cross-linguistic variation, as Non-Redundancy predicts that pronominals cannot be locally bound, yet it is known to be untrue, cf. Frisian or Khanty.

Safir (2004) bases his binding theory on competition. He proposes a scale of relative degree of dependency for morphological forms, and a form to interpretation principle (FTIP), which “determines whether or not a dependent interpretation is supported by a given form in syntactic context” (Safir 2004: 102).

- (3) Generalization: Between any two anaphors, the more referentially specified one is more dependent, whereas among nonanaphors, the more referentially specified one is less dependent. (Safir 2004: 86)

which for Germanic yields the following scale:

- (4) SIG-SELF >> pronoun-SELF >> SIG >> pronoun >> r-expression
- (5) FTIP (simplified): If X c-commands position Y, and *z* is the lexical form or string that fills Y, and it is not the most dependent form available in Y, then Y cannot be interpreted as identity dependent on X.

The notion of a dependency in Safir (2004) is considered a primitive concept. Safir’s theory accounts for a lot of data cross-linguistically, however, it does not attempt to relate these to more elementary properties of grammar. It also does not provide any tools for the analysis of languages with no visible competition or lack of competition in certain domains, when two forms are equally possible, as it happens with *zich* and *hem* in PPs in Dutch, or with *seg* and a pronominal in cases of non-local binding in Scandinavian (see Reuland (2009, 2011) for a detailed discussion). It does not therefore appear to be well-suited to explain the properties of the anaphoric systems in the languages discussed in this dissertation, where such lack of complementarity abounds.

Hornstein (2000), as well as Boeckx et al. (2007) and Drummond et al. (2011), bases his take on binding on movement-chains. According to Hornstein (2000), an anaphor is the morphological offspring of a copy of the antecedent, which in cases of local binding can surface as a reflexive (see the discussion in Drummond et al. (2011)). This approach is minimalist in spirit as it reduces binding to a special case of another kind of grammatical relation, namely movement. However, it is largely ignorant of morphology and thus cross-linguistically inadequate: “the form of the anaphor plays no real role in the interpretation afforded” (Drummond et al. 2011: p. 399). The theory does not take into account the various morphological realizations reflexivity can take across languages like verbal reflexives, which makes it difficult to apply the theory to the languages with a rich morphosyntactic inventory. Boeckx et al. (2007) argue that Hmong and San Lucas Quiavini Zapotec wear the movement analysis on their sleeves, however to provide a consistent account which could be extended to English they have to make ad-hoc language-specific stipulations.

Rooryck and Vanden Wyngaerd (2011) also attempt to reduce syntactic binding to a more general grammatical principle, namely Agree. The mechanism relating an anaphor and its antecedent is a feature valuation under Agree: reflexive pronouns enter the derivation with unvalued features and function as probes. For instance, the Dutch *zich* has unvalued features for number and gender. Their antecedents function as goals valuing the reflexives’ features. For reflexives to be probes Rooryck and Vanden Wyngaerd (2011) have to stipulate that they always c-command their antecedents. They assume that Agree does not copy feature values, it causes feature values to be shared by probe and goal. Spell-out, then, associates a particular feature matrix with a form. Thus as a result of valuation, reflexive pronouns, such as the Dutch *zich*, end up having the same feature composition as their non-reflexive counterparts such as *hem*. The question is, how to prevent the reflexive being spelled out as *hem*. In order to achieve this, after valuation, the features of the reflexive are enriched with an annotation indicating that they result from Agree. This is illustrated in (6) for person (P), number (N), and gender (G):

- | | | | |
|-----|----|------------------|--|
| (6) | a. | {P:3, N:sg, G:m} | lexically valued features (possible goals) |
| | b. | {P:_, N:_, G:_} | unvalued features (probes) |

c. {P:3*, N:sg*, G:m*} features valued after Agree

Here the asterisk * indicates that the values in (6c) are derived, rather than ‘original’. Hence, the spell-out component can distinguish between (6a) and (6c), ensuring that (6a) is spelled out by *hem*, and (6c) by *zich*, which is sensitive to the presence of an asterisk.

To account for the use of 1st and 2nd person pronouns in the absence of reflexive pronouns Rooryck and Vanden Wyngaerd (2011) propose an APBE principle:

- (7) Absence of Principle B effects (APBE):
 Pronouns behave like anaphors when a dedicated class of reflexive pronouns is lacking. (p. 19)

According to Rooryck and Vanden Wyngaerd (2011), variation is a result of two factors: syntactic configuration and the morphological inventory of a given language. The theory proposed by Rooryck and Vanden Wyngaerd (2011) is quite minimalist in spirit. However, it has a significant theoretical draw-back, in that the asterisk, which plays a crucial role, is not a standard morpho-syntactic feature. In fact it has the same theoretical status as an index and its insertion violates the inclusiveness condition. It should also be noted that their account for APBE effects does not capture the cross-linguistic asymmetry between 1st and 2nd person pronouns on the one hand and 3rd person pronouns on the other: whereas local binding of the former is quite common, local binding of the latter is rare (see Reuland (2011) for discussion). An empirical problem is that the proposed mechanism cannot account for long-distance uses of *zich* and its cognates in, for instance, Scandinavian languages. In such cases it is impossible for *zich* to be valued within the domain in which it should be spelled out. There is some discussion of this in their book, but the issue remains unresolved.

We will see quite a few further facts in the languages studied in this dissertation that seem rather problematic for a theory with the architecture they propose. For instance, the languages under discussion have three types of pronominal elements: pronominals that may not be locally bound, typical reflexives that must be locally bound and an intermediate type, of elements that may, but need not be locally bound. What the latter two types of elements share in common and again is their complexity. Apart from the problems their existence poses for possible spell-out conditions this shared property cannot be captured at all in the architecture Rooryck and Vanden Wyngaerd propose. Finally, we will see that in Khanty pronouns are compatible with a reflexive interpretation only on the presence of a specific object agreement marker. This is incompatible with the locally conditioned nature of spell-out rules (see section 1.4.1).

In summary, none of the theories discussed is able to effectively address the issues that are my primary concern.

1.3 My approach

The approach I adopt in this dissertation is largely inspired by Reuland (2011) who deconstructs the macrouniversals of the CBT. 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). In this section I will discuss the main notions of the theory.

I assume that the C-I interface lacks order and hierarchy (Chomsky 1995). The core of the theory is the IDI constraint which states that at the C-I interface in a representation without order and hierarchy, the two occurrences of a variable in a local domain are indistinguishable. Reflexive strategies are the ways languages employ to avoid the effects of IDI. They can be sorted in two groups: valence reduction (one of the occurrences of a variable is eliminated) and protection (adding complexity to one of the occurrences of a variable). Depending on its morphosyntactic feature compositions, the protecting element can not only license reflexivity, but also enforce it. An interpretive dependency between a pronoun and its antecedent can be established at three different levels: in the narrow syntax, at the C-I interface or in discourse, where encoding in the narrow syntax is the most economical. The theory proposed by Reuland (2011) is minimalist in spirit and rooted in the properties of the C_{HL} . This dissertation explores its cross-linguistic adequacy.

1.3.1 The IDI constraint

Intuitively, reflexivity obtains in a structure in which one argument of a predicate is bound by another argument of the same predicate. I adopt the following definition of binding from Reinhart (2006) (bound elements are indicated by italics):

- (8) a. A-binding: α A-binds β iff α is the sister of a λ -predicate whose operator binds β (Reinhart 2006: 171)
- b. *Alice* was sitting next to *her* sister.
- c. Alice (λx (x was sitting [next to x’s sister]))
 Rendering *her* as x (rather than some other alphabetic variant) expresses the bound variable (BV) construal of *her*.

It is easy to conceive that the most straightforward way of expressing reflexivity would be by binding a pronominal. Following Reuland (2011), I will call this pattern “brute force” reflexivization.

- (9) *DP V Pronoun*

It has been noted, however, that languages in general try to avoid brute force reflexivization employing various strategies to license reflexivity. Heine

and Miyashita (2008) state that “reflexivity and reciprocity are universal concepts in so far as all languages can be expected to have some grammaticalized expression for both” (Heine and Miyashita 2008: 172). Prima facie exceptions exist among pidgins and creoles, as well as in Malayo-Polynesian languages, especially the Oceanic languages. But Moyse-Faurie (2008) argues that Oceanic languages are in fact no exception to Heine and Miyashita’s statement and “offer a large spectrum of morpho-syntactic devices to mark coreference” (Moyse-Faurie 2008: 107).

Why do languages employ special means to mark reflexivity? Or, in other words, why does reflexivity need to be licensed? At the core of this problem lies the inability of the computational system of human language (C_{HL}) to distinguish identical occurrences of a variable in a local domain, namely the Inability to Distinguish Indistinguishables (IDI) (Reuland 2011). 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 and 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 (10b) the representation of binding contains two tokens of the variable x which instantiate one linguistic object. Following Chomsky (1995) and many 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 occurrences of the variable, they get identified – cf. (10b) 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* (57) has two θ -roles to assign and only one variable x they can be assigned to. Hence, ill-formedness ensues.

- (10) a. *Alice admires her.*
 b. $[VP\ x\ [V'\ V\ x]\] \rightarrow * [VP\ V\ x\]$
- (11) a. Alice $(\lambda x\ [_{\text{admire}}\ [\theta_1, \theta_2]\ x\ x\])$
 b. Alice $(\lambda x\ [_{\text{admire}}\ [\theta_1, \theta_2]\ x\])$
 $\theta_1?\ \theta_2?$

This discussion also raises a question of indeterminacy with the thematic roles of non-reflexive verbs, i. e. how θ -roles for the set {likes, John, Mary} are to be assigned. However, this is orthogonal to the issue at hand, which is why I will leave it open.

Summarizing, in a domain where neither order nor hierarchy is defined to distinguish between occurrences of identical variables, they get identified, which

leads to a violation of the θ -criterion due to a mismatch between θ -structure and formal arity. Indeterminacy follows, and the derivation is cancelled.

The problem of handling identicals in a local domain is a general property of C_{HL} , also manifested in the Obligatory Contour Principle (Leben 1973), the distinctness condition on linearization (Richards 2002) and the antilocality condition on movement (Abels 2003) (see Reuland (2011) for discussion).

Thus, there is a general problem expressing reflexive predicates in the *prima facie* most straightforward way. Languages may be expected to employ special means to express reflexivity.

1.3.2 Reflexive strategies

What makes reflexive predicates special, is the need to keep apart (two) occurrences of the same linguistic object in a local domain. The issue is how to obtain a reflexive interpretation while avoiding brute force reflexivization. There are two logically conceivable strategies (Reuland 2011):

- I. Valence reduction + Bundling: Eliminating an offending occurrence of a variable and enabling the two roles to be assigned to one remaining argument after valence reduction.
- II. Protection: Making the two arguments formally distinct, but allowing (a suitable approximation of) a reflexive interpretation.

The proposed approach does not violate the inclusiveness condition as these strategies do not apply within a derivation, but they involve alternative derivations using different arrays of lexical items (different numerations in the sense of Chomsky (1995)).

Bundling

The Theta System (Reinhart 2002; Marelj 2004; Reinhart and Siloni 2005) presents a general theory of operations on argument structure, one of which is Bundling of θ -roles. The Bundling operation reduces the internal argument of a two-place predicate and combines the internal role (theme) and the external role (agent) into a composite agent-theme role.

(12) Bundling:

- a. $V_{ACC}(\theta_1, \theta_2) \rightarrow R_S(V)(\theta_{1,2})$ (where $\theta_{1,2}$ stands for the Bundling of θ_1 and θ_2)
- b. $V[Agent]_1[Theme]_2 \rightarrow V[Agent-Theme]_1$

Example (13) illustrates reflexivity implemented in the form of Bundling. The sentence in (13a) contains the base transitive verb and is interpreted as

(13b). The sentence in (13c) presents the derived reflexive verb. As its interpretation in (13d) shows it also has two θ -roles, but they are assigned to the same argument.

- (13) a. John washes Bill.
 b. $\exists e$ [wash(e) & Agent(e, John) & Theme(e, Bill)]
 c. John washes.
 d. $\exists e$ [wash(e) & Agent(e, John) & Theme(e, John)]

It is easy to show that the reflexive verb in (13c) is intransitive with the help of the object-comparison test of Zec (1985)¹. Object comparison requires a transitive antecedent. Example (9b) as opposed to (9a) shows that in English the reflexive verb *wash* is intransitive.

- (14) a. John washes himself more than George.
Object comparison: John washes himself more than ~~John washes~~ George.
 b. John washes more than George.
Object comparison: *John washes more than ~~John washes~~ George.
 (Dimitriadis and Everaert 2012)

Dimitriadis and Everaert (2012) show for English and Dutch that reflexive verbs successfully pass tests for both agent and patient/theme semantic roles proving that reflexive verbs semantically are two-place predicates with both semantic roles syntactically encoded and accessible. Reflexives are agentive, e.g. they can be used with imperatives and agent-oriented adverbs like *carefully*.

- (15) a. Shave! Wash! Undress!
 b. John shaved / washed / undressed carefully.

The evidence that reflexive verbs retain the theme role comes from the compatibility with adverbs like *painfully* or *completely*, which target the explicit theme/patient role².

¹For an illuminating discussion of bundling and verbal reflexives see Dimitriadis and Everaert (2012).

²I would like to thank Marijana Marelj who pointed out to me that this test might need more exploration. As evident from (ia), *painfully* can also modify an Agent role alone. Further, one might expect that the adverb *completely* should be licensed with Theme (animate subjects) and Theme (inanimate subjects) verbs, as in (ib) and (ic) respectively.

- (i) a. He walked painfully.
 b. He died/left completely.
 c. The bell buzzed completely.

- (16) a. John ate *(the apple) completely.
 b. Mary hit *(John) painfully.

Both adverbs (with a suitable context) can be used to modify reflexive verbs.

- (17) a. John shaved / washed / undressed completely.
 b. John shaved / washed / undressed painfully.

Hence, according to Dimitriadis and Everaert (2012), a reflexive verb is syntactically intransitive: it projects a single argument, but semantically it is a two-place predicate: both theta-roles are retained and assigned to the remaining syntactic argument.

Valence reduction may also affect the Case assigning properties of the predicate. Reflexivization is parameterized in the following respect: Languages vary as to whether valence reduction also eliminates the accusative, e.g. English, Hebrew, or leaves a Case residue that still has to be checked, e.g. Dutch, Frisian, Norwegian (for further discussion see section 1.3.4).

Protection

The other way of avoiding IDI is by keeping the two arguments formally distinct by adding complexity to one argument (generally, the object argument). The pronoun can be protected through embedding it in a complex NP structure. Cross-linguistically this often happens through a SELF-element, a body part noun (18) or a doubled pronoun (19).

- (18) Iḵoni mreḵ oma-reḵ-oyen.
 John see.PST body-ASSOCM-him
John saw himself (lit. *John saw his body*). [Urhobo, Niger-Congo]
 (Afranaph Database)

- (19) Rasul^y-ē wudḵ-ē wudḵ yaramališ-a[?]-u.
 Rasul-ERG REFL.1-ERG REFL.1.ABS wound-1.do-PF
Rasul wounded himself. [Tsakhur, North Caucasian]
 (Toldova 1999)

As a result, the bound pronoun, i.e. the variable, is protected:

- (20) Instead of $V[x, x]$, use $V[x, [\text{Morph } x]]$ interpreted as $V(x, f(x))$, where $\|f(x)\| \approx \|x\|$

The choice and interpretation of *Morph* follow from the necessity to express a reflexive relation and are limited by conditions of use. *Morph* must be interpreted so as to yield a function of x mapping it onto an object that can be a proxy for x . It should make some minimal contribution to interpretation,

otherwise it would fail to protect x at the interface. A suitable *Morph* then adds complexity which allows to tell apart two tokens of a variable at the C-I interface, yet is sufficiently close to x for a reflexive interpretation.

Licensing vs. enforcing reflexivity

The account presented so far makes no specific claims about locality of anaphoric binding. Cross-linguistically in many languages complex reflexives must be locally bound, which is reflected in the Principle A of the CBT:

- (21) Principle A: *An anaphor is bound in its governing category.*
(Chomsky 1981: 188)

This generalization is true for many languages, cf. a body part reflexive in Ibibio:

- (22) a. Okon_i á-má ídém ọmọ_i.
Okon AGRS-love body his
Okon loves himself. [Ibibio, Niger-Congo]
(Afranaph Database)
- b. *Okon_i á-diọngọ ké Edem á-ma ídém ọmọ_i.
Okon AGRS-know that Edem AGRS-like body his
Okon knows that Edem likes him. [Ibibio, Niger-Congo]
(Afranaph Database)

However, in a number of languages there are reflexives for which Principle A of the CBT does not hold, Reuland (2011) discusses two examples from Malayalam and Peranakan Javanese. The body part reflexive in Peranakan Javanese *awake dheen* can have an antecedent within the clause, an antecedent of a higher clause or a discourse antecedent.

- (23) Ali_j ngomong nek aku pikir [Tono_i ketok awak-e dheen_{i/j/k} nggon
Ali N-say COMP 1SG think Tono see body-3 3SG in
kaca].
mirror
Ali said that I thought that Tono saw himself/him in the mirror.
[Peranakan Javanese, Austronesian] (Cole et al. 2008: 580)

To account for this, Reuland (2008, 2011) draws a line between *licensing* and *enforcing* reflexivity. The enforcement of reflexivity, i.e. the local binding requirement, results from the factors independent of licensing, namely from a dependency between a licensing element and a predicate, triggered by economy and restricted by the syntactic configuration. Such a dependency may follow from a (covert) head movement of a *self* or a body part element to the verb.

Note that there is no logical reason that the interpretation of *himself* would involve overt or covert movement. It would be quite conceivable that the semantic composition procedure of *himself* with a predicate would yield a reflexive predicate. And in fact, this is what the interpretation of reflexives in, for instance, Keenan (1988) amounts to. Nevertheless, this cannot be generally the case, since it would fail to explain why the interpretation of *himself* as an obligatory reflexivizer is subject to syntactic constraints in a language like English. In other languages, however, a purely semantic process may be all we need.

Discussing enforcement of reflexivity from a cross-linguistic point of view, Reuland (2008, 2011) provides a scenario based on the empirical assumption that *self* and body part nouns have minimal lexical content and are relational nouns that are intrinsically (near-) reflexive. A *self* is always some individual's self, a *body* – some individual's body. As a head of a –Ref(erential) argument they may (covertly) adjoin / incorporate to the nearest c-commanding predicate in order to saturate a thematic role. Along the lines of Reuland (2011) I will assume that this movement is triggered by economy: the most economical way to establish an interpretive dependency is by a syntactic process. Hence, if this route is available it will be taken.

The English *himself* can serve as an illustration of the point. Empirical evidence indicating that SELF may act as a reflexivizer comes from nominalizations like *self-hater* or *self-admirer* and participles like *self-correcting*, *self-duplicating*, or *self-admiring*, etc. In all such cases *self* attaches to a relation-denoting expression and turns it into a reflexive relation. The hypothesis then is that in the case of verbal predicates, *self* essentially plays the same role. The reason *self* must relate to the verb by a form of syntactic movement, rather than by some other process, resides in the following fact.

In certain environments which impede movement, *himself* behaves drastically differently from what is expected. While usually it must be locally bound – cf. (24a), in coordinate structures, for instance, it may be bound by a more remote antecedent (24b). It follows from the coordinate structure constraint that it is impossible to move *self* from within a coordinate structure, hence reflexivity would not be enforced. However, this does not lead to ungrammaticality as *her* in *herself* can be interpreted independently (I discuss this issue further in section 1.3.4).

- (24) a. **Alice* expected the king to invite *herself* for a drink.
 b. *Alice* expected the king to invite [the White Rabbit and *herself*]
 for a drink. (Reuland 2011: 215)

Following Pollard and Sag (1992), I will call the positions where *self*'s adjoining to the predicate is syntactically blocked *exempt*. In such positions, the English *himself* is used as a *logophor*. If, however, the interpretation of an element is determined by a syntactic process: Merge or Agree, as it happens with *himself* in argument positions or with the Dutch *zich* and the Scandinavian *sig*

(Reuland 2011), it is used as an *anaphor*³.

The *self* element covertly head-adjoins to a verb V, creating a SELF-V, which is reflexive (Reuland 2001, 2011). Thus, the English *himself* both *licenses* and *enforces* reflexivity. Licensing reflexivity happens through protection of a variable with SELF yielding complexity. Enforcing reflexivity is obtained through SELF-movement onto the verb. In contrast, the Peranakan Javanese *awake dheen* only licenses reflexivity, but does not enforce it, hence it is not constrained by a locality requirement. Whether or not a reflexive strategy in a given language would enforce reflexivity or not, depends on its morphosyntactic composition. For *awake dheen* Schadler (2014) argues that *awake* is merged in a specifier position in the left periphery, therefore left branch condition effects prevent movement onto the verb.

The semantics of SELF-marking as developed in Reuland and Winter (2009) (see also Reuland (2011)) is formulated in Jacobson (1999)’s framework of variable free semantics and is based on the ability of the reflexive pronouns to have proxy readings (Jackendoff 1992). Apart from purely reflexive reading, a reflexive pronoun invokes a set of proxies associated with its antecedent (a set of proxies of an expression denoting a person contains statues, pictures, etc. of that person). As illustrated in (25), *himself* can be interpreted as a real person and a statue:

- (25) When Ian Somerhalder came to the Mme Tussaud museum in London, *he* was surprised to find *himself* standing there.

Reuland and Winter (2009) propose that:

- i. The context specifies a reflexive proxy relation that defines possible “proxies” for the entities referred to;
- ii. Pronouns denote a particular type of function (Skolem functions; see (26)) that take proxy relations as their argument;
- iii. Elements like *self* are ordinary relational nouns, and their only special property is their ability to compose as lexical proxy relations with pronouns and binding operators.

The definition of the Skolem function is as follows:

- (26) A function f of type (ee) with a relational parameter $P(\text{roxy})R(\text{elation})$ is a Skolem function if for every entity x : $PR(x, f_{PR}(x))$ holds.

Reuland and Winter (2009) discuss two options for the semantic composition of *self* and the Skolem function. In the unmarked case the noun *self*

³I will also occasionally use the term *anaphor* as a convenient label to refer to a class of pronouns with “defective” referential properties as opposed to *pronominals* which are fully referential.

composes with it through the binding mechanism. The noun *self* is covertly attached to the transitive predicate and contributes a proxy relation to the nonreflexive pronoun through Jacobson’s Z function in its “proxied” version:

$$(27) \quad Z^{PR} = \lambda R. \lambda f. \lambda x. R(x, f_{PR}(x))$$

In this version of the Z function, it provides the Skolem function f with its parameter. The denotation of a VP like *find himself* in (25) is obtained using the structure *self-find him*, analysed as follows:

$$(28) \quad Z^{\text{self}}(\text{find})(\text{him}) = Z^{\text{self}}(\text{find})(f) = \lambda x. \text{find}(x, f_{\text{self}}(x)) = \lambda x. x \text{ finds one of } x\text{'s } \textit{self} \text{ proxies (by definition of } f \text{ as a Skolem function)}$$

If *himself* occupies an exempt position, it composes with the Skolem function directly. This leads to the following analysis:

$$(29) \quad \textit{himself} = f_{\text{self}} = \text{a function mapping every entity } x \text{ to one of its proxies in } \mathbf{self}(x)$$

Unlike the unmarked option, now there is no binding that is made necessary by *self*’s composition. As a result, the exempt reading of *himself* allows it to be interpreted as either bound or free, similarly to the non-reflexive pronoun *him*.

In sum, there are two ways for interpretation of a SELF-element:

- (1) by syntactic movement followed by a semantic interpretation of the structure derived;
- (2) if syntactic movement is blocked, by semantic composition only, insensitive to constraints on movement.

Concluding, various means of expressing reflexivity across languages can be grouped in two strategies: one involves valence reduction accompanied by bundling operation, the other creates protection for the variable. The locality constraint is imposed if *self* or a body part element of a reflexive (covertly) moves onto the verb, enforcing reflexivity.

1.3.3 The mechanics of establishing dependencies

What are the ways of establishing a dependency between an antecedent and a pronoun? “The key to a proper understanding of the conditions governing the interpretation of anaphoric expressions is the division of labor between three major components of the language system: narrow syntax, the C-I interface, and the discourse component” (Reuland 2011: pp. 60-61). Narrow syntax (also referred to as the C_{HL}) is a component of the language system that contains a numeration and the elementary operations on morphosyntactic objects: *Merge*

(an operation which takes two syntactic objects and forms a third one from them) and *Agree* (an operation which establishes relations between syntactic objects – agreement, Case checking – by feature checking) (Chomsky 2000, 2008). The C-I interface (LF, logical syntax) is an interface between C_{HL} and the interpretation system. Reuland (2011) argues convincingly, that at the basis of this division of labour lies the economy principle, which establishes the following economy hierarchy (see Koornneef (2008); Koornneef et al. (2011) for experimental evidence supporting the claim):

- (30) narrow syntax < C-I interface < discourse

In terms of economy, first encoding a dependency in narrow syntax is preferred over first encoding it at the C-I interface, while the latter is preferred over first encoding it as covaluation in the discourse component. Identity of variables in LF can be encoded in narrow syntax by a movement mechanism or by identification of ϕ -feature bundles, which is effected by valuation under *Agree* via chain formation. At the C-I interface, where syntactic structures are read into the inference system, A-binding (see the definition in (8)) applies (Reinhart 2006): a pronoun is translated as a variable. That is why this type of binding is often called variable binding. A-binding requires c-command. In the discourse component the dependency between an antecedent and a pronoun is coreference, it is not subject to any structural constraints and is not limited to pronouns. Hence, the economy hierarchy in (30) can be also rendered as (31).

- (31) *Agree*-based chains & SELF-movement < variable binding < coreference

The difference between A-binding and coreference can be best illustrated by the contrast in implications between strict and sloppy readings under the focus particle *only*, as in example (32). The reading in (32b) instantiates coreference. Jeremy has a property of respecting a certain female who is his or someone else's wife. All other men do not respect this person, but may well respect their own wives. In order for binding to obtain, the dependent element must be translated as a variable and its antecedent must be a sister of the λ -predicate. The bound reading in (32c) implies that the other men do not respect their wives.

- (32) a. Only Jeremy respects his wife.
 b. *strict*: Only Jeremy (λx (x respects y's wife)), y can be valued as any male individual
 c. *sloppy*: Only Jeremy (λx (x respects x's wife))

Where the choice exists, syntactic binding in the form of chain formation always comes first. If it is not applicable, variable binding comes into play. Coreference is the most 'costly' option of establishing a dependency.

Chain formation

In the theory proposed by Reuland (2011), dependencies in narrow syntax can be established either by a movement mechanism (as discussed in the previous section) or via Agree-based chains. The particular implementation of the latter option is based on Pesetsky and 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, which is very roughly presented in (33).

$$(33) \quad \begin{array}{ccccccc} \text{DP} & & \text{T} & & \text{V} & & \text{pronoun} \\ \underbrace{\quad\quad\quad} & & \underbrace{\quad\quad\quad} & & \underbrace{\quad\quad\quad} & & \\ \text{R1} & & \text{R2} & & \text{R3} & & \end{array} \quad (\text{Reuland 2011: 146})$$

R1 stands for subject-verb agreement,
 R2 stands for the verb-tense dependency, and
 R3 for the structural Case dependency between a verb and its object.

$$(34) \quad \begin{array}{l} \text{Alice}_\phi \text{ voelde}_\phi \text{ zich}_\phi \text{ wegglijden.} \\ \text{Alice feel.PRT SE slide.away} \\ \text{Alice felt she was sliding away.} \end{array} \quad [\text{Dutch}]$$

The ϕ -feature sharing between *Alice* and *voelde* is brought about by subject-verb agreement; the ϕ -feature sharing between *voelde* and *zich* is mediated by the structural Case relation. Entering a chain and becoming valued is the result of an elementary, blind grammatical process. Feature sharing induces identity between the objects involved and, thus, replaces indexing, a stipulative mechanism employed in the CBT and the earlier versions of the Reflexivity theory.

The feature valuation process is restricted by a condition on identification of ϕ -feature bundles: the Principle of Recoverability of Deletion (PRD, Chomsky (1995)). The idea behind the PRD is that no information may be lost, hence deletion is only possible if an interpretively equivalent copy of the deleted element is retained.

In the theory outlined, chain formation performs two roles: it captures the distribution of pronominals versus SE anaphors and it captures the hierarchical effects in local binding that do not follow from the IDI (for instance, in the ECM-contexts like (33)).

A chain must be formed between an anaphor and its antecedent if it can be formed. The absence of an alternative anaphoric element is not sufficient to license local binding of a pronominal. Pronominals cannot tail a chain as they are fully specified for ϕ -features, and forming a chain would violate the PRD. A violation of PRD entails cancellation of the derivation in the sense of Chomsky (1995). A canceled derivation blocks any derivation from the same numeration less optimal in terms of economy. A chain condition violation can only be avoided if the conditions for chain formation are not met. If no chain can be formed, this does not entail ‘no binding’, it only entails ‘no encoding of the binding relation in narrow syntax’.

1.3.4 A case study: English, Dutch and Frisian

In this subsection I will briefly show how the theory outlined in this section accounts for the quirks of anaphoric systems in three Germanic languages. This discussion is meant as an illustration, for further details I refer the reader to Reuland (2011).

English has an anaphoric system with a two-way distinction: an anaphor *himself* and a pronominal *him*. Frisian has a two-way distinction as well: an anaphor *himsels* and a pronominal *him*. Dutch exemplifies a three-way system: a SELF-anaphor *zichzelf*, a SE-anaphor *zich* and a pronominal *hem*.

All three languages in focus use valence reduction accompanied by bundling for a subgroup of agent-theme verbs (35a)–(37a). As briefly mentioned in section 1.3.2, in contrast to English, in Dutch and Frisian valence reduction leaves a residual Case that needs to be checked – by *zich* in Dutch and *him* in Frisian, which is why *Peter wast* \emptyset (36a) with a reflexive reading would be illicit in Dutch. In this case both the Dutch *zich* and the Frisian *him* serve as expletives⁴ rather than arguments.

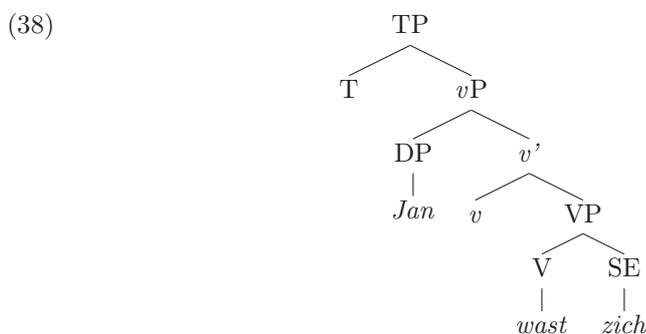
- (35) a. John washed.
 b. *John* admired **him* / *himself*.
- (36) a. *Peter* wast *zich* / * \emptyset / **hem*.
 Peter washes SE / \emptyset / him
Peter washes. [Dutch]
- b. *Peter* haatte **zich* / **hem* / *zichzelf*.
 Peter hates SE / him / SE-SELF
Peter hated *himself*. [Dutch]
- (37) a. *Peter* wasket *him*.
 Peter washes him
Peter washes. [Frisian]

⁴I use *expletive* here as a term for an element that formally looks like an argument but is not semantically interpreted.

- b. *Peter bewûnderet *him / himsels.*
 Peter admires him / him-SELF
Peter admires himself. [Frisian]

Thus, Frisian allows locally bound pronominals with a certain lexical class of agent-theme verbs (*wash*-type verbs). The difference between Frisian and Dutch lies in the way the ACC feature relates to the T-system. While in Dutch it is a structural Case related to the T-system (an uninterpretable Tense feature following Pesetsky and Torrego (2007)), in Frisian the verb may license a case that is not uninterpretable Tense, but rather ‘inherent’ and comparable to a Case assigned by a preposition (Hoekstra 1994; Reuland 2011). This difference is manifested in the way chain formation works in Dutch vs. Frisian.

In (37a) *him* is a 3rd person pronominal, which allows both a bound and a disjoint reading. In the very same context in Dutch (36a) the anaphor *zich* would be used. The Dutch *zich* is ϕ -feature deficient and bears a structural Case, hence a ϕ -feature chain is to be formed between a DP and the pronoun. Let us first have a look how a chain $\langle Jan, zich \rangle$ is formed in the feature sharing approach of Pesetsky and Torrego (2007) (quoting the analysis in (Reuland 2011: ch. 5)).



According to Pesetsky and Torrego (2007), structural nominative Case on the external argument DP is unvalued T. The unvalued interpretable T-feature on Tns probes and finds the uninterpretable and unvalued T-feature on the external argument, the Agree-operation creates a link. T probes again and finds *v*'s valued uninterpretable T-feature, which leads to valuation of T on Tense and Subject. Hence, we have a T-dependency Subject-*v*-T. SE anaphors have unvalued interpretable ϕ -features and unvalued uninterpretable structural accusative Case. The (object) EPP feature on *v* probes and finds SE as a goal, triggering the movement of SE to the edge of *v* (39). Tns has unvalued uninterpretable ϕ -features. Subject DP has valued interpretable ϕ -features. *v* has unvalued uninterpretable ϕ -features. The Tns-*v*-DP T-dependency extends to a ϕ -feature dependency. In the configuration (39) Tns probes and finds $SE_{u\phi}$, the Agree operation creates a link. After valuing SE, the instructions of interpretation of SE are the same as for the ϕ -features of the external argument.

Dutch it is combined with *zich*, a 3rd person pronoun deficient in number. This contrast manifests itself in a difference in syntactic behaviour (Reuland 2011). While in English and Frisian SELF-anaphors allow for exempt readings, this is not the case in Dutch (except for 1st and 2nd person)⁵. This fact is illustrated in (43). In (43a) only the local subject *de koningin* ‘the queen’ can be the antecedent of *zichzelf*, although this reading is infelicitous. In (43b) *de koningin* ‘the queen’ cannot serve as the antecedent of *zichzelf*, even though this is the only felicitous interpretation. In both sentences a pronominal with or without *zelf* is required to refer to the matrix subject.

- (43) a. Max_i pochte dat de koningin Lucie en zichzelf*_i / hem_i(zelf) voor
 een borrel had uitgenodigd. [Dutch]
Max boasted that the queen invited Lucie and himself for a drink.
- b. De koningin_i eist dat boeken met onflatteuze beschrijvingen van
 zichzelf*_i / haarzelf_i verbrand worden. [Dutch]
*The queen demands that books containing unflattering descriptions
 of herself be burned.* (Reuland 2011: 95)
- (44) Jan wie bliid dat de keninginne Marie en himsels op 'e tee
 John was happy that the queen Mary and himself for a tea
 noege hie. [Frisian]
 invited had
John was happy that the queen invited Mary and himself for tea.

The Dutch anaphor *zichzelf* contains *zich*, which is ϕ -feature deficient. For this reason *zich* is subject to independent binding requirements, namely chain formation for ϕ -feature valuation, which is not the case for *him* in English. Hence environments exempting elements of the form <pronominal-SELF> will not necessarily exempt the SE part of <SE-SELF>.

1.3.5 Summary

In the previous subsections I discussed the main points of the theory developed in Reuland (2011) which I take as my starting point. It inherits one of the main insights of the Reflexivity theory of Reinhart and Reuland (1993) as it pays specific attention to reflexivity as a property of predicates and thus allows to treat verbal and nominal reflexivization as instances of the same phenomena. Languages are expected to use special means to license reflexivity because C_{HL} cannot handle identicals in the local domain without structure or hierarchy. The theory adheres to the Feature Determinacy Thesis:

- (45) *Feature Determinacy Thesis:*
 Syntactic binding of pronominal elements (including anaphors) in a

⁵It is worth mentioning that Dutch has an element *hemzelf* that does have a logophoric interpretation similarly to its English and Frisian counterparts (see Koster (1987)).

particular environment is determined by their morphosyntactic features and the way these enter into the syntactic operations available in that environment. (Reuland 2011: 22)

Reflexivity can be licensed by valence reduction accompanied by bundling or by protection. Depending on the properties of the protective element, it can merely add complexity protecting the variable or enforce reflexivity due to a syntactic dependency with a predicate.

The difference between licensing reflexivity and enforcing it is going to be crucial for the discussion of the language data in the next chapters. Note that enforcing reflexivity and requiring local binding are not in one-to-one correspondence. English *himself* is an element that enforces reflexivity in an argument position via SELF-movement. Yet, it is also possible to employ it in locative PPs. Conversely, Norwegian *sig* must be bound in the first finite clause. That is in no way an indication of reflexivity enforcement but a result of chain formation. The reflexivization operation on the predicate and the chain condition have different domains. While the former requires binding in the coargument domain, the latter, depending on the syntactic parameters of the language, can encode long-distance binding.

Reuland (2001, 2011) also explores the notion of economy, arguing that encoding a dependency in the narrow syntax is the cheapest option for the computation, encoding it in the logical syntax is more costly, while encoding it in the discourse is the most costly option.

As argued by Reuland (2011), the features [+/- pronominal] and [+/- anaphoric] of the CBT are not primitive features of the grammatical system. Rather, the behaviour of a particular element follows from the way in which its morpho-syntactic features, such as for instance its ϕ -features, interact with the environment. Consequently, notions such as pronominal or anaphor have no theoretical status. Clearly, however, they are still useful as descriptive terms. Hence we can try to reconstruct these notions. For instance we can define pronominals as objects that only consist of ϕ -features and are fully specified for them, or we can define anaphors as objects that are related to their antecedent by syntactic chain formation (directly, by a ϕ -feature chain in the case of *zich*-type anaphors, or more indirectly by an operation like SELF-movement in the case of complex anaphors). Such reconstructions by themselves are not true or false, however they can be more or less useful depending on how well they capture our pre-theoretical usage.

The same holds for the term reflexive. There is a pre-theoretical notion (as in Faltz (1985)) in which any object-like element that appears to play a role in ‘reflexive constructions’ can be called a reflexive. Thus, elements like the Dutch *zich*, and *zichzelf*, the English *himself*, the Russian *-sja*, and *sebja*, the Georgian *tav tavis*, the Italian *si*, and *se stesso*, the Bahasa Indonesia *dirinya* and *dirinya sendiri*, the Peranakan Javanese *awake dheen* and *awake dheen dhewe*, but also the Frisian *him*, and *himsels*, would all be called ‘reflexives’. The role these

elements play is so diverse, however, that in my view – in this broad sense – the term is not very useful and cannot be reconstructed in a coherent way. Instead, I will take as the basis for my use of the term what one could call a prototypical reflexive, namely elements such as the English *himself* or the Dutch *zichzelf*. These are elements that in ‘prototypical environments’, such as the object position of a transitive verb, not only license reflexivity by protection, but also enforce it by effecting an operation on the predicate that causes one of its arguments to be bound by another argument, as in *John admires himself* where *self* forces the subject to bind the object. As we saw, there are languages that also have elements that do license reflexivity in such an environment, but do not enforce it. This lack of enforcing can show up in the possibility to have an antecedent in a higher clause, but also in allowing an inclusive reference reading (for instance if a language allows the counterpart of **I saw ourselves* as grammatical) or if it allows split antecedents, as for instance in *John showed Mary a picture of themselves*, which English only allows in exempt positions (see chapter 3 for detailed discussion of split antecedents in Meadow Mari). In this dissertation I will make the following terminological distinction: I will call the elements, which license reflexivity by protection, but do not enforce it, *semi-reflexive*. The term *reflexive* will be reserved for prototypical reflexives that both license and enforce reflexivity. Note that the notion of a semi-reflexive does not cover elements such as the Dutch *zich*, or the Frisian *him*. These elements do not license reflexivity in my terms, although they might be argued to do so indirectly since they license the lexical operation of bundling.

In the rest of the chapter I will outline the puzzles which are posed for binding theories by the Uralic languages in focus.

1.4 The Uralic reflexivity puzzles

In my dissertation I will discuss the facts from five Uralic languages: Meadow Mari (the Sernur-Morkin dialect, as spoken in the village of Staryy Torjal), Komi-Zyrian (the Pechora dialect, as spoken in the village of Yeremeyevo, and the Izhma dialect, as spoken in the village of Muzhi), Udmurt (the Besermjan variety, as spoken in the village of Shamardan), Erzya (the Shoksha dialect, as spoken in the village of Shoksha) and Khanty (Shuryshkary dialect, as spoken in the village of Tegi)⁶. The data were compiled through questionnaires and in a number of field trips in Russia. If not specified otherwise, all the data below belong to these dialects and may diverge from the literary norm.

⁶I adopt here the glossing notations and transcription conventions developed in Kuznetsova (2012a) which summarizes the results of ten years of field work (2000–2010) in these languages. The only exception is the glossing for the stem of reflexive pronouns which I gloss as *self*, while in Kuznetsova (2012a) it is glossed as REFL. Given the theoretical framework I use, I prefer to refrain from ascribing a gloss that has multiple theoretical connotations.

1.4.1 Local binding of pronominals

Khanty does not employ dedicated reflexive pronouns (Nikolaeva 1995). Instead personal pronouns can be used when arguments of a predicate are covalued.

- (46) a. Ułtiteχo_i łuveł_{i/k} išək-s-əłhe.
 teacher he.ACC praise-PST-SG.3SG
The teacher praised him(self). [Khanty]
- b. Nemχojat_i łuveł_{i/k} änt išək-l-əłhe.
 no.one he.ACC NEG praise-NPST-SG.3SG
No one praises himself / him. [Khanty]

Example (46a) illustrates the use of the 3rd person pronoun *łuv* with a two-place predicate: The pronoun is ambiguous between a bound and a disjoint reading. The same holds true if the subject of the sentence is non-referential: in (46b) the subject of the sentence is the quantifier *nemχojat* ‘no one’. This indicates that the dependency between *łuv* and its antecedent involves binding instead of mere coreference.

Khanty data makes an interesting case for testing the competing binding theories. It rules out a semantic approach proposed by Schlenker (2005). Schlenker (2005) (see p. 4) sets up his theory in such a way that it excludes the existence of locally bound pronouns – cf. Non-Redundancy in (2). Yet, *prima facie*, it seems to make perfect sense for Levinson (2000) and can be easily accounted by Safir (2004) in terms of the absence of a competitor (but see discussion in section 2.5).

For the theory proposed by Reuland (2011), local binding of 3rd person pronominals raises issues on two different levels: it could potentially be a violation of the IDI principle or constraints on chain formation. As outlined in section 1.3, one of the central claims of the theory is that the computational system of human language cannot handle identicals in the coargument domain.

The second problem is the constraints on the process of chain formation. Chain formation results from a blind syntactic process. A pronominal cannot enter a chain configuration with its subject-antecedent, since this would violate the principle of the recoverability of deletions (Chomsky 1995). Following the economy principle (Reuland 2011), rejection is final, thus it would block any alternative use of the same element (variable binding or discourse coreference).

Hence, to explain the way the Khanty anaphoric system functions in the framework of Reuland (2011) I will need to establish, that, firstly, no chain is formed between the subject and the locally bound third person pronominal and, secondly, that the bound variable is protected.

1.4.2 Split antecedents

There is a general agreement in the literature on binding that, whereas pronominals allow split antecedents⁷, anaphors do not allow them. The phenomenon of split antecedents can be illustrated as follows: in English the pronominal *they* allows split antecedents (47c), unlike the anaphor *himself* (48).

- (47) John and Mary told Tom that they would go on vacation.
- a. John and Mary told Tom that the Smiths would go on vacation.
 - b. John told Tom that John would go on vacation, and Mary told Tom that Mary would go on vacation.
 - c. John told Tom that John and Tom would go on vacation, and Mary told Tom that Mary and Tom would go on vacation.
- (48) *?John showed Mary themselves.

Dimitriadis (2000), discussing pronominal anaphora, notes that a plural pronoun *they* can have three types of readings: a “fixed” reading as in (47a) that could refer to anything, as long as all speakers state the same proposition; a singular dependent reading as in (47b), in which the dependent pronoun is identified with each speaker separately; or a split dependent reading as in (47c) in which the dependent pronoun refers to one speaker plus some other, fixed argument of the sentence (Dimitriadis 2000: 109). The interpretation of *they* is determined only once per construal.

Dimitriadis (2000) further points out that the fixed readings enjoy much greater freedom for antecedent selection than the fixed part of the split dependent reading. The latter appears to be restricted to individuals in the current sentence. Even in the presence of suitable prior context, it seems difficult, if not impossible, to include a discourse-supplied entity.

As Dimitriadis (2000) shows, split antecedents can be accommodated in the following manner. A split dependent pronoun is neither referential nor a bound variable, but its meaning can be expressed as a function that takes any individual x to the plural individual consisting of x plus some other, fixed individual. A singular dependent pronoun is represented simply as the identity function (Dimitriadis 2000: 110).

From Giorgi (1984) and Chomsky (1986) to Anagnostopoulou and Everaert (2013), it has been considered an intrinsic property of anaphors and a test for ‘anaphorhood’ that anaphors don’t allow split antecedents. However, in Meadow Mari, Komi-Zyrian, Udmurt and Erzya there are pronouns which *prima facie* look like anaphors (49a)–(53a), yet allow split antecedents⁸ (49b)–(53b).

⁷An antecedent is split if it consists of (at least) two DPs which occupy separate argument positions.

⁸From the typological point of view this ability is not unique: quite a few pronouns standardly classified as reflexive in the languages across the world, for instance in Japanese and Korean, allow split antecedents (Katada 1991; Kasai 2000; Ishino and Ura 2012).

- (49) a. Kažne šken-ž-əm jorat-a.
 everyone self-3SG-ACC like-PRS.3SG
Everyone likes himself. [Meadow Mari]
- b. Pet'a_i Jəvan-lan_j kartəč'k-əšte šken-əšt-əm_{i+j} onč'-əkt-en.
 Petja Ivan-DAT photo-INESS self-3PL-ACC see-TR-PRT
Petja showed to Ivan them(selves) on the photo. [Meadow Mari]

In Meadow Mari the pronoun *škenəštəm* in (49b) carries a 3rd person plural possessive affix *-əšt-*, requiring a plural antecedent. This requirement is illustrated by the contrast between (50a) and (50b): in the latter example *škenəštəm* is marked for 3rd person plural, while the subject is singular: the mismatch in features makes the sentence ill-formed. This indicates that, unlike pronominals, *škenəštəm* must have an antecedent in the sentence. The question is then how the dependency is established.

- (50) a. Nuno_i šken-əšt-əm_i pətar-a-t.
 they self-3PL-ACC harm-PRS-3PL
They harm themselves.
- b. *Tudo_i šken-əšt-əm_{i+j} pətar-a.
 he self-3PL-ACC harm-PRS.3SG
 Int.: He harms themselves.

The pattern in Udmurt and Komi-Zyrian is exactly the same.

- (51) a. N'ikod as'-se i-z myždy.
 no.one self-ACC.3 NEG.PRT-3 blame
No one blamed himself. [Izhma Komi]
- b. Mam-ys_m p'etkydl-i-s č'el'ad-ys-ly_c as'-ny-s-se_{m+c} fotokartočka
 Mother-3 show-PRT-3 child-3-DAT self-PL-3-ACC.3 photo
 vyly. [Izhma Komi]
 on
The mother showed to the child themselves on a photo.

- (52) a. Pet'a asô-z-e jarat-e.
 Peter SELF-3-ACC like-PRS.3SG
Peter likes himself. [Udmurt]
- b. Pet'a_i vož'mat-i-z fotokartoč'ka-ôš' Van'a-lô_j asô-z-e-s_{i+j}.
 Peter show-PRT-3 photo-EL Vanja-DAT self-3-ACC-PL
Peter showed Vanja them(selves) in the photo. [Udmurt]

In Erzya the pronoun *es' pr'et'* 'self head-DEF.GEN' is deficient in person, but its plural form in (53b) forces the split antecedent reading.

- (53) a. Son večk-sa-za tol'ko es' pr'e-t'.
 he like-PRS-3SG.O.3SG.S only self head-DEF.GEN
He likes only himself. [Erzya]

- b. Pet'e-s'_i n'eft'-i-ze Vas'e-t'e_j es'
 Peter-DEF.NOM show-PRT-3SG.O.3SG.S Vasja-DAT SELF
 pr'e-t'-n'in'_{i+j} (fotografija naŋk-sa).
 head-PL.DEF.GEN photo on-INESS
Peter showed to Vasja them(selves) on the photo. [Erzya]

In the sentences with split antecedents above (49b), (51b)–(53b), the Meadow Mari *škenže* and its counterparts feature in a photo-context which I used to achieve pragmatic plausibility during elicitation. It is reminiscent of the exempt picture context in English – cf. the contrast in (54). The English *himself* allows split antecedents in the exempt position (54a), but not in the argument position (54b).

- (54) a. *John showed Mary a picture of themselves.*
 b. **John showed Mary themselves.*

However, unlike in (47), in examples (49b), (51b)–(53b), the interpretation and felicity conditions do not change if there is no mention of photos, hence there is no reason to suspect that the split antecedents reading is an exemption effect.

The mechanisms for syntactic chain formation imply that chains are always uniquely headed. Hence, the ability to take split antecedents points out that for the Meadow Mari *škenže* and its counterparts in Udmurt, Komi-Zyrian and Erzya, the mechanism of establishing dependencies is not via chain formation.

If a dependency is established through movement (as discussed on p. 13), a reflexive proxy relation is created. It requires that the variable protected by *self* denotes an entity from the set of proxies of the antecedent. This again effectively excludes the possibility of split antecedents. Consequently, we can conclude that *škenže* and its counterparts do not enforce reflexivity, but only license it. Given the terminological distinction introduced in section 1.3.2, I will call them semi-reflexives.

The ability of reflexives across languages to take split antecedents calls for a close investigation of the issue. The assumption that anaphors cannot take split antecedents is wired in most current minimalist binding theories through the way a dependency between an anaphor and its antecedent is established. Rooryck and Vanden Wyngaerd (2011) derive binding from the operation Agree. The prohibition of split antecedents comes from the fact that Agree is unique, “i.e. can only involve one probe and one goal at the same time”. Drummond et al. (2011) building on Hornstein (2000) reduce binding to movement. They argue that an anaphor is the morphological offspring of a copy of the antecedent. Following this approach, it is logical to conclude that split antecedents are disallowed because it is impossible to move more than one DP into the same position. Schlenker (2005) makes provisions to account for split antecedents for plural pronouns, however his analysis of reflexives as arity

reducers leaves no leeway in that respect. Levinson (2000) and Safir (2004) do not discuss this issue. Split antecedents turn out to be also quite puzzling for Reuland (2011) who reduces anaphor binding to SELF-movement and Agree-based chains.

1.4.3 Dative experiencer predicates

Apart from allowing split antecedents another puzzling property of the Finno-Ugric semi-reflexives is their binding domain. The Meadow Mari *škenže* and its counterparts should be bound within the first finite clause containing it (there is some variation among languages in focus in (dis-)allowing long distance binding in embedded infinitival clauses). In example (55) the dative form of the Meadow Mari semi-reflexive *škenže* in the embedded infinitival clause can be bound both by the subject of the infinitival clause PRO and the subject of the matrix clause *üdər* ‘girl’.

- (55) Üdər_i rveze_j de-č’ [Ø_j ška-lan-že_{i/j} pört-əm əšt-aš] jod-ən.
 girl boy near-EL PRO self-DAT-3SG house-ACC make-INF build-PRT
The girl_i asked the boy_j to build herself/himself a house. [Meadow Mari]

In case of the participial embedded clause (56) a long-distance reading is impeded, however. In (56) the semi-reflexive *škenže* 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*.

- (56) Pet’a_i [Ø_j *šken-ž-əm_i / tud-əm_i üž-še] üdər_j de-ne
 Petja PRO self-3SG-ACC / he-ACC call-PTCP.ACT girl near-INESS
 kušt-en.
 dance-PRT
Peter danced with the girl that invited him. [Meadow Mari]

However, if the embedded predicate happens to be a dative experiencer predicate, for instance the Meadow Mari *kelšaš* ‘appeal to’, the situation changes. In the example (57) the pronoun *škanže* in the embedded participial clause in the context of the dative experiencer predicate can be bound by the matrix subject *Pet’a*.

- (57) Pet’a_i [ška-lan-že_{i/*j} kelš-əše] imm’-əm Van’a-lan_j
 Petja self-DAT-3SG please-PTCP.ACT horse-ACC Vanja-DAT
 pölekl-en.
 give.as.a.present-PRT
Petja_i gave to Ivan a horse that appealed to him_i. [Meadow Mari]

Furthermore, if the dative experiencer predicate happens to be in an embedded finite relative clause as in (58a), the semi-reflexive *škenže* 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. (58b).

- (58) 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-3SG please-PRT Vanja-DAT
 pölekl-en.
 give.as.a.present-PRT
Petja gave to Vanja as a present a horse, which pleased him. [Meadow Mari]
- b. Petər_i pört-əm [kud-əm Van'u_j ška-lan-že_{i/*j} č'oŋ-a]
 Peter house-ACC which-ACC Ivan self-DAT-3SG build-PRS.3SG
 už-ən.
 see-PRT
Peter saw the house, that Ivan builds for himself. [Meadow Mari]

The same pattern for Komi-Zyrian, Udmurt and Erzya is shown in examples (59)–(61), with the (a) examples illustrating the general prohibition of long-distance binding in the embedded participial clauses, while the (b) and (c) examples demonstrate the availability of long-distance binding with dative experiencer verbs in the embedded participial clauses (59b), (60b) and in the embedded finite relative clauses (59c)–(61b).

- (59) a. Pet'a_i gətras'-i-s [aš'-sə_{i/*j} rad'ejt-is'] nyl_j vyl-yn.
 Peter marry-PRT-3 self-ACC.3 love-PTCP.ACT girl up-INESS
Peter married a girl which loved herself. [Pechora Komi]
- b. Pet'a_i tədməd-i-s Vas'a-əs_j [kažitč'-is' as-ly-s_{i/*k}]
 Peter introduce-PRT-3 Vasja-ACC appeal.to-PTCP.ACT self-DAT-3
 nyvka-kəd_k. [Pechora Komi]
 girl-COMIT
Petja introduced Vasja to girl which appealed to him(self).
- c. Bat'-ys_i tədməd-i-s pi-sə_j nyv-kəd_k [kody as-ly-s_{i/*k}
 father-3 introduce-PRT-3 son-ACC.3 girl-COMIT which self-DAT-3
 kažitč'-i-s]. [Pechora Komi]
 appeal.to-PRT.3
The father introduced his son to a girl who appealed to him(self).
- (60) a. Ivan_i mən-i-z [as-lə-z_{i/*j} korka baš'-t-əš'] ad'am_i
 Ivan come-PRT-3 self-DAT-3 house take-SMLF-PTCP.ACT man
 dor-ə.
 near-ILL
Ivan came to a man, who bought himself a house. [Udmurt]
- b. Ivan_i baš'-t-i-z pi-ez-lə_j [as-lə-z_{i/*j} jara-š' korka].
 Ivan take-SMLF-PRT-3 son-DAT self-DAT-3 love-PTCP.ACT house
Ivan bought (his) son a house which appealed to him. [Udmurt]
- c. Pet'a_i kəšnoja-š'k-i-z nəlmurt-en [kodiz as-lə-z_i jara].
 Peter marry-DETR-PRT-3 girl-INSTR which self-DAT-3 appeal.to
Peter married a girl who appealed to him. [Udmurt]

- (61) a. Vas'e-s'_i ajg-i-ze t'ory-ŋgi-t'_j [Ø_j
 Vasja-DEF.NOM push-PRT-3SG.O.3SG.S boy-DIM-DEF.GEN PRO
 pufty-z' es' pr'e-t'*_{i/j}].
 wake.up-PTCP self head-DEF.GEN
Vasja pushed the boy who woke up himself [Erzya]
- b. Pet'e-s'_i maks-y-ze Van'e-t'e_j alaše-t'
 Peter-DEF.NOM give-PRT-3SG.O.SG.S Vanja-DAT horse-DEF.GEN
 kona-s' es'-t'e-nde_i er'av-e.
 which-DEF.NOM self-DAT-3SG be.necessary-PRS.3SG
Peter gave Vanja a horse, which is necessary to himself. [Erzya]

In Komi-Zyrian, just like in Meadow Mari, the semi-reflexive *ač'ys* as an argument of a dative experiencer predicate can be long-distance bound by the matrix predicate both in the embedded participial clause and in the finite relative clause. In Udmurt for *ač'iz*, it is only possible in the embedded participial clauses. In Erzya the semi-reflexive *es'* demonstrates long-distance binding abilities only in finite relative clauses with dative experiencer predicates.

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

1.5 Outline

In the next five chapters I will discuss anaphoric systems of the following Uralic languages: Khanty (chapter 2), Meadow Mari (chapter 3), Komi-Zyrian (chapter 4), Besermyan Udmurt (chapter 5), and Erzya (chapter 6). Chapter 7 analyses the sources of variation in the Uralic languages in focus and concludes.

CHAPTER 2

Tegi Khanty

In this chapter I discuss data from Khanty, a language that, *prima facie*, lacks nominal reflexive marking. In Khanty there are no dedicated reflexive pronouns, instead personal pronouns are used where one would expect to find anaphors given the binding conditions of the canonical binding theory (Chomsky 1981). Khanty, therefore, poses a problem for condition B of the CBT and a possible challenge for the IDI and chain formation constraints (Reuland 2011). I provide an analysis that allows to reunite the language facts with the approach of Reuland (2011), thus broadening our view on the different ways reflexivity can be licensed in a natural language.

This chapter is based on a joint work with Eric Reuland¹.

2.1 Short overview of the language

2.1.1 Sociolinguistic background

Khanty [kca] is a Uralic language spoken by some 9,500 people (2010 census) spread up over several thousand square kilometers in north-western Siberia, Russia. According to the Ethnologue (Lewis et al. 2013), the ethnic population totals 28,700. Living in remote communities, the Khanty have developed a

¹The data presented were compiled during a fieldwork trip in July 2012. I gladly acknowledge the organizational help of the department of Linguistics of the Lomonosov Moscow State University and wish to thank the heads of the expedition Ariadna Ivanovna Kuznetsova and Svetlana Yurjevna Toldova. The trip was funded by the NWO project “Universals and the Typology of Reflexives”.

dialectal continuum, the further ends of which diverge greatly both in grammar and lexicon and are mutually incomprehensible (Nikolaeva 1999b). The Khanty language is listed as definitely endangered by UNESCO (Moseley 2010) and as threatened by Ethnologue (Lewis et al. 2013). The variety reported below is spoken in the village of Tegi on the river Malaya Ob' in the Beryozovsky District in the north-western part of the Khanty-Mansi Autonomous Region².

The Tegi variety can be considered severely endangered: it is spoken only by the older generation, who rarely use it among themselves. Most of our native speakers switched to Russian at home when raising children, which resulted in the next generation being unable to speak the language, though some understand it. This development can at least partly be explained by a certain pressure from the school system: the education in primary school is in Russian, so the children have to speak Russian by the age of seven when they go to school. There are some lessons in Khanty each week, but the books use a different variety. Another contributing factor is that migration of Khanty speakers, even over small distances to other villages or towns where some other variety of Khanty is spoken, makes them face a relatively high degree of unacceptance of their dialect, which also, reportedly, forces them to switch to Russian.

2.1.2 Grammar sketch

Khanty has a basic SOV structure coupled with a relatively free word order (Nikolaeva 1999b). In Tegi Khanty a SVO word order is also quite frequent³.

- (1) a. Pet'a-ən χǎlevət imi-əl-a pisma χǎš-ti
 Petja-P.2SG tomorrow wife-P.3SG-DAT letter write-INF
 pit-ł.
 become-PRS.3SG
Tomorrow Petja will write a letter to his wife.
- b. Pet'a-ən imi-əl-a χǎlevət χǎš-ti pit-ł
 Petja-P.2SG wife-P.3SG-DAT tomorrow write-INF become-PRS.3SG
 pisma.
 letter
Tomorrow Petja will write to his wife a letter.

The sentence structure is highly dependent on the structure of the discourse and passive is widely used to preserve the topic. Khanty distinguishes two types of verbal agreement: obligatory subject agreement and optional object agreement (see the next subsection). Objects triggering agreement on the verb

²In the preceding chapter, I will use the term Khanty as referring to the Tegi Khanty variety if not indicated otherwise.

³In example (1) the subject *Pet'a* carries a 2nd person singular possessive suffix. This suffix is used with proper names occupying subject and sometimes object positions as a discourse marker to indicate some contextual relation to the listener.

Case	Person & Number										
	1SG	2SG	3SG	1DU	2DU	3DU	1PL	2PL	3PL		
NOM	ma	nəŋ	huv	min	nin	fin	muŋ	nin	hiŋ / hiv		
ACC	mānem	nəŋen	huvet	–	ninaŋ	–	munev	niŋan	hi(v)et		
DAT	mānema	nəŋena	huveta	minema	ninena	finana	muneva	ninena	hi(v)eta		

Table 2.1: Pronominal paradigms for Tegi Khanty

usually have a special status with respect to the information structure of the sentence and differ in their syntactic behaviour from objects that do not trigger agreement. The former tend to be associated with old information, secondary topics, while the latter tend to express new information (see Nikolaeva (1999a,b, 2001) for detailed discussion). Objects triggering agreement are characterized by a relatively free position in the sentence, while objects that do not trigger agreement are usually situated in the immediately preverbal position (Nikolaeva 1999b). Further, Nikolaeva (1999b) argues that objects triggering agreement are realized in a VP-external position.

In the verbal domain there are two synthetic tenses – past and nonpast, and an analytical future tense created with the auxiliary verb *pitti* ‘start’. The language has a rich system of aspectual markings and affixes reflecting changes in argument structure such as causativisation, and detransitivisation.

The nominal system distinguishes three morphological cases – Nominative, Dative, and Locative. The direct object is encoded with the unmarked case (the same form as Nominative) and the differential indexing on the verb with the choice between subject and subject-object agreement. Personal pronouns also distinguish three morphological cases – Nominative, Dative and Accusative (see table 2.1). The language has three numbers: singular, dual and plural. The pronominal system has three persons: 1st, 2nd and 3rd.

2.1.3 Subject agreement versus object agreement

If both arguments of the verb in Khanty are full DPs, the verb can agree only with the subject or with both subject and object (2).

- (2) Ut̩titeχo poχleŋki išək-l-əł̩e / išək-s.
 teacher boy praise-NPST-SG.3SG / praise-PST.3SG
The teacher praises / praised the boy.

The verb agrees with the subject in number and person (cf. table 2.2) and with the object in number – singular or plural (cf. table 2.3). The dual vs. plural distinction is absent in object agreement in Tegi Khanty unlike in the Sob idiom described by Nikolaeva (1999b). The object agreement marker is closer to the verbal stem than the subject agreement marker (3a). The morpheme order is present in (3b).

- (3) a. Učitel-t_i l̩veł̩_{i/k} išək-s-əł̩-əł̩.
 teacher-PL they.ACC praise-PST-PL-3PL
The teachers praised them(selves).
- b. Subject_[Pers;Num] Object_[Pers;Num] Verb-T-O_{NUM}-S_{PERS;NUM}
-

Person	Number					
	SG		DU		PL	
1	iřak-s	-əm	iřak-s	-əmən	iřak-s	-uv
2	iřak-s	-ən	iřak-s	-ətən	iřak-s	-əti
3	iřak-s		iřak-s	-əŋən	iřak-s	-ət

Table 2.2: Subject agreement in Tegi Khanty, past tense

If the object is singular, the object agreement does not get overt marking, unless the subject is 3rd person singular. In the latter case, for both singular and plural objects, the subject-object agreement is expressed cumulatively with the marker *-ətte*. If the object is plural, the verb is marked with the suffix *-ət*.

The subject agreement paradigm for the verbs carrying both subject and object agreement (table 2.3) differs from the ‘independent’ subject agreement paradigm (table 2.2) in the following respects. In 1st person singular, dual and plural as well as in 2nd person singular the markers have different vowels: for the ‘independent’ subject agreement it is [ə] or [u]; for the subject-object agreement if the object is singular it is [e] and if the object is plural it is [a] or [ə]. The markers for subject agreement are completely different in the subject-object agreement paradigm (table 2.3) in 3rd person singular (cumulative marker *-ətte* vs. no overt marking for ‘independent’ subject agreement), in 2nd person dual and plural (*-(ə)tən* vs. *-ətən* for 2nd dual and *-əti* for 2nd plural), and in 3rd person plural (*-ət* vs. *-ət*). The markers that match exactly between the two subject agreement paradigms are 3rd person dual (for singular object) and 2nd person singular (for plural object).

Subject	Object					
	SG			PL		
SG	1	iřak-s-	∅	-em	iřak-s-	ət -am
	2	iřak-s-	∅	-en	iřak-s-	ət -ən
	3	iřak-s-	(ət)te		iřak-s-	ətte
DU	1	iřak-s-	∅	-emən	iřak-s-	ət -amən
	2	iřak-s-	∅	-ətən	iřak-s-	ət -tən
	3	iřak-s-	∅	-əŋən	iřak-s-	ət -tən
PL	1	iřak-s-	∅	-ev	iřak-s-	ət -əv
	2	iřak-s-	∅	-ətən	iřak-s-	ət -tən
	3	iřak-s-	∅	ət	iřak-s-	ət -ət

Table 2.3: Subject-object agreement in Tegi Khanty, past tense

Under favourable discourse conditions Khanty easily allows subject drop (Nikolaeva 1999b). Example (4) shows, that once introduced the subject can be omitted in the following sentences under the topic continuence condition.

- (4) χ oleivt aŋk-em ropota-ja an mant-l. N'avrem piła
 tomorrow mother-P.1SG work-LOC NEG go-NPST.3SG child with
 jomtepit-l.
 play-NPST.3SG
Tomorrow my mother won't go to work. (She) will play with the child.

Object agreement on the verb is necessary for object drop. Once the object has been introduced in the discourse it can be dropped if the verb carries subject-object agreement. The verb forms in (5) *metšəsle*, *talsəlle*, and *perətsəlle* agree with the subject of the sentence which is 3rd person singular and with the object which is singular, hence the marker *-(ə)tə* is used. With this configuration of markers on the verb, the object itself can be omitted.

- (5) *One autumn day a man went to the forest and suddenly saw a bear in the lake caught up in the ice.*
 S'alta keł-ən metš-əs-le, vuti-šek tał-s-əlle,
 then rope-LOC tie-PST-SG.3SG bank-COMP drag-PST-SG.3SG
 χ un-əl-a nuχ perət-s-əlle.
 belly-P.3SG-DAT up turn-PST-SG.3SG
*Then (he) tied (it/*himself) with a rope, dragged (it/*himself) to the bank of the lake and turned (it/*himself) over.*

It is worth mentioning that under object drop no reflexive interpretation is available (also noted in Nikolaeva (1999b)).

In what follows I discuss the reflexive strategies used in Khanty and provide an analysis for the potential problems Khanty poses for my approach, namely the problems with the IDI and the chain formation constraints.

2.2 Handling identicals

As discussed in section 1.3, I adhere to the view that the computational system of human language cannot handle identicals in a local domain (IDI). Thus, there is a general requirement that reflexivity must be licensed (either by bundling of thematic roles or by protection (Reuland 2011)). What ways are employed by Khanty to keep the variables distinct? There are two main strategies: detransitivisation with the suffix *-ij(t)-* accompanied by bundling of θ -roles and the local binding of the pronominals in Khanty. Tegi Khanty has also developed an optional doubling strategy: a pronominal such as *tuw* 'he' is doubled to create a reflexivizer *tuw tuwet* that protects a variable by adding complexity to the object argument. I will discuss this in section 2.4.

2.2.1 Detransitivisation and bundling

In Tegi Khanty, a closed subclass of agent-theme verbs like *wash* or *defend* can undergo detransitivization with the suffix *-ij(t)*⁴ to express a reflexive relation.

- (6) a. *l'oxətti* 'wash' – *l'oxətijtti* 'wash oneself'
 b. *Łuv l'oxət-ij-əl.*
 S/he wash-DETR-NPST.3SG
He washes.
- (7) a. *eηχəsti* 'undress' – *eηχəsijtti* 'undress oneself'
 b. *Pox eηχəs-ij-əs.*
 boy undress-DETR-PST.3SG
The boy undressed.

Example (8) shows that the derived verb *l'oxətijtti* 'wash oneself' cannot take a direct object.

- (8) a. *As'i n'avrem l'oxət-əl.*
 father child wash-NPST.3SG
The father washes the child.
- b. **Pet'a n'avrem l'oxət-ij-s.*
 Petja child wash-DETR-PST.3SG
 Int: Petja washes the child.

The suffix *-ij(t)*- represents one of the ways to avoid the IDI, namely eliminating the offending occurrence of a variable by detransitivizing the verb. As discussed in section 1.3.2, this kind of detransitivization is accompanied by bundling, an operation of assigning the two θ -roles to the remaining argument. Bundling is one of the operations on argument structure within the Theta System (Reinhart 2002; Reinhart and Siloni 2005). It reduces the internal argument of a two-place predicate and bundles the internal role (theme) and the external role (agent) into a composite agent-theme role.

- (9) Bundling:
 a. $V_{acc}(\theta_1, \theta_2) \rightarrow R_s(V)(\theta_{1,2})$ (where $\theta_{1,2}$ stands for the Bundling of θ_1 and θ_2)
 b. $V[Agent]_1 [Theme]_2 \rightarrow V[Agent-Theme]_1$

One of the ways to show that bundling reduces the internal argument of a two-place predicate is the wax museum context of Jackendoff (1992). In English, for example, the only visible difference between the transitive verb *wash* and its reflexive counterpart is the absence of the direct object – interpreted as zero reflexive in some approaches (Bergeton 2004; Bergeton and Pancheva 2012).

⁴I gloss the suffix *-ij(t)*- as DETR as it can mark various detransitivization operations.

Yet, a zero reflexive would be expected to allow a proxy interpretation just like any pronoun object.

- (10) a. {Upon a visit to Mme Tussaud wax museum,} *Ringo washed himself.* (^{OK}Ringo, ^{OK}Ringo's statue)
 b. {Upon a visit to Mme Tussaud wax museum,} *Ringo washed.*
 (^{OK}Ringo, *Ringo's statue)

Example (10b) shows that the reflexive *wash* is syntactically intransitive: it does not allow a proxy-interpretation, hence it does not project a syntactic object. Similarly in Khanty the verb *l'oxətti* 'wash' in (11a) is detransitivized, hence the only reading available for (11a) is that Gorbachev washed himself, and not his statue/picture/etc. In contrast, its transitive counterpart in (11b) allows proxy readings.

- (11) a. Gorbachev muzej-a joxt-əs i huv pam'atnik
 Gorbachev museum-DAT come-PST.3SG and he monument
 s'ijal-s. ?Luv l'oxət-i-s.
 see-PST.3SG he wash-DETR-PST.3SG
Gorbachev came to the museum and saw a monument to himself.
He washed.
 b. Gorbachev muzej-a joxt-əs i huv pam'atnik
 Gorbachev museum-DAT come-PST.3SG and he monument
 s'ijal-s. Luv huv l'oxət-s-əlle.
 see-PST.3SG he he.ACC wash-PST-SG.3SG
Gorbachev came to the museum and saw a monument to himself.
He washed himself / the monument.

As bundling creates a complex θ -role, the remaining argument should display both the properties of the agent and the theme roles. The modification test with the adverb *täləŋteln* 'completely, as a whole' shows the availability of the theme role properties (see section 1.3.2 and Dimitriadis and Everaert (2012) for discussion).

- (12) Pet'a-jən *(n'an' pul) täləŋteln joxi le-s(-le).
 Petja-P.2SG bread piece as.a.whole down eat-PST(.SG).3SG
Peter ate a whole piece of bread.

Adverbs like *completely* target the explicit theme/patient role. Example (12) shows a two-place predicate *leti* 'eat' modified with the adverb *täləŋteln* 'completely, as a whole'. In its presence the internal argument of the verb can not be omitted, while usually it can. The adverb *täləŋteln* 'completely, as a whole' requires an accessible theme role. The same effect is present in (13a). In (13b) there is no internal argument of the verb, however, a modification with the adverb *täləŋteln* 'completely, as a whole' is still possible, which shows that

the verb derived with the suffix *-ij(t)*- retains the theme role and semantically is a two-place predicate. Although it projects only one argument, both semantic roles are assigned to it and accessible.

- (13) a. Pet'a-jøn tälaŋteŋ noχ l'oχət-s-əlle.
 Petja-2SG as.a.whole up wash-PST-SG.3SG
(He) washed Petja completely.
 b. Van'a-jøn tälaŋteŋ l'oχət-ij-s.
 Vanja-2SG as.a.whole wash-DETR-PST.3SG
Vanja washed himself completely.

The reciprocal interpretation, which cross-linguistically often patterns with reflexivization, is not available:

- (14) N'avrem-ət l'oχət-i-s-ət.
 Child-PL wash-DETR-PST-3PL
*The children washed (each of them – himself / *each other).*

The suffix *-ij(t)*- can also express decausative.

- (15) Šovər χän'-ət-ij-l̄.
 hare close-CAUS-DETR-NPST.3SG
The hare is hiding. (D. Privoznov, p. c.)

The suffix *-ij(t)*- is not compatible with subject-experiencer verbs like *know*, *remember*, *trust*. A doubling strategy presented in (16b) (see section 2.4.2 for discussion) is used with this type of verb to express a reflexive relation.

- (16) a. *nuomti* 'remember' – **nuomtiti*
 b. Pet'a-jøn łuv łuveł nuom-l̄-əlle.
 Petja-2SG he he.ACC remember-NPST-SG.3SG
Petja remembers himself.

In this subsection I discussed one of the ways to satisfy the IDI, namely by eliminating one argument variable. In Tegi Khanty it is achieved with the help of a detransitivizing suffix *-ij(t)*-.

2.2.2 Locally bound pronominals

As discussed in section 1.4.1, the other reflexive strategy Khanty employs apart from detransitivisation, is the use of locally bound pronominals. In (17a) the 3rd person pronoun *łuv* occupies an object position of a two-place predicate. It is ambiguous between a bound and a disjoint reading. Example (17b) is a parallel sentence with a non-referential subject – a quantifier *nemχojat* 'no one' which shows that the dependency between *łuv* and its antecedent instantiates binding and not coference.

- (17) a. Ut̩titeχo_i huve_{i/j} išək-s-əlle.
 teacher he.ACC praise-PST-SG.3SG
The teacher praised him.
- b. Nemχojat_i huve_{i/k} änt išək-l-əlle.
 no.one he.ACC NEG praise-NPST-SG.3SG
No one praises himself / him.

To be sure that elements such as *nemχojat* indeed behave as quantifiers I put them through the Heim test (Heim 1982), which they successfully passed. In (18a) *poχleŋki* ‘boy’ is a referential expression, hence the 3rd person pronoun *luv* ‘he’ can refer back to it across a sentential boundary. In contrast, *nemχojat* ‘no one’ is not an individual denoting expression, and therefore *luv* ‘he’ cannot co-refer with it, thus rendering an illicit combination of the sentences⁵.

- (18) a. Poχleŋki vuontə-s-le ar. Ari-ti (luv) pit-əl?
 boy learn-PST-3SG.SG song sing-INF he start-NPST.3SG
The boy learnt the song. Will he sing?
- b. Nemχojat ar änt vuontl-əs. *Ari-ti luv pit-əl?
 no.one song NEG learn-PST.3SG sing-INF he start-NPST.3SG
 Int.: No one learnt the song. Will he sing?

Therefore, as such local binding of pronominals in Khanty is rather problematic for the current approach. In order to explain how it functions I need to establish firstly that no chain is formed between the subject and the locally bound third person pronominal, and secondly, that the bound variable is protected.

If one takes a closer look at the reflexivity pattern in Khanty, it turns out that the bound reading of the pronoun *luve_l* is impeded, once there is no object agreement on the verb – cf. the contrast between examples (17) and (19). A pronominal can be bound, but does not have to be, if the verb agrees with the object (17). However, if the verb does not agree with the object, a pronominal can have only a disjoint reading.

- (19) Ut̩titeχo_i huve_{*i/j} išək-s.
 teacher he.ACC praise-PST.3SG
*The teacher praised him / *himself.*

In the following sections I will argue that it is the object agreement in Khanty that serves as a protection strategy for the variable by adding complexity to satisfy the IDI principle. It also prevents chain formation in case of the locally bound pronominal in (17).

⁵In the variety of Khanty described by Nikolaeva (1999b), quantifiers cannot be used in the subject position.

2.3 Chain formation

2.3.1 The pattern

The predicate of a transitive sentence in Khanty can agree only with the subject or both with the subject and object – cf. (20a). With full NPs the choice depends on the information structure of the sentence. When the position of the direct object of the verb is filled with a pronominal, for instance, the 3rd person pronoun *luv*, the availability of the bound interpretation for it depends on the type of agreement the verb is carrying. If the verb agrees only with the subject, *luv* always gets the disjoint reading (20b). The bound reading is illicit (20c). If the verb agrees with both subject and object, both disjoint (20d) and bound (20e) interpretations are possible, and the choice between them or the preference towards one or the other depends on the plausibility of context.

- (20) a. Ut̩titeχo poχleŋki iʃək-s-əlle / iʃək-s.
 teacher boy praise-PST-3SG.SG / praise-PST.3SG
The teacher praised the boy.
- b. Ut̩titeχo_i luveŋ_j iʃək-s.
 teacher he.ACC praise-PST.3SG
The teacher praised him.
- c. *Ut̩titeχo_i luveŋ_i iʃək-s.
 teacher he.ACC praise-PST.3SG
*The teacher praised him / *himself.*
- d. Ut̩titeχo_i luveŋ_j iʃək-s-əlle.
 teacher he.ACC praise-PST-SG.3SG
The teacher praised him.
- e. Ut̩titeχo_i luveŋ_i iʃək-s-əlle.
 teacher he.ACC praise-PST-SG.3SG
The teacher praised himself.

Example (20c) presents a normal pronoun pattern, 3rd person pronominals usually cannot be locally bound. The sentence in (20c) is illicit for two reasons. It violates IDI (see section 2.4), and it violates conditions on chain formation. 3rd person pronominals carry a number ϕ -feature, in this case singular. Each occurrence of the number feature in the numeration receives its own independent interpretation, therefore deleting this feature in the process of chain formation would violate the principle of the recoverability of deletions (see section 1.3.3 and for further discussion (Reuland 2011: ch. 5)).

A violation of PRD entails cancellation of the derivation. A canceled chain formation for the pair $\langle Ut̩titeχo, luveŋ \rangle$ blocks establishing dependencies that are less optimal in terms of economy, namely at the levels of logical syntax (C-I interface) and discourse (Reuland 2011: ch. 4).

However, once there is object agreement on the verb (20e), the bound reading is available for the pronominal *tuvel*. Therefore, I conclude that the object agreement offers the way to circumvent a violation of the principle of recoverability of deletions and prevents the pronominal *tuvel* from creating a chain with the subject. The next subsection discusses the contribution of the object agreement.

2.3.2 The role of object agreement

What is the position of object agreement on the syntactic spine? A possible choice would be AgrO (Mahajan 1990) introduced in the Minimalist program (Chomsky 1992) as a locus of object agreement under the Split Infl Hypothesis (Pollock 1989). However, as Agr-projections do not receive an interpretation at the interface with the interpretation system, Chomsky (1995: ch. 4) argued that they should be discarded and replaced by a two-layered VP-shell for active transitive verbs, as proposed by Hale and Keyser (1991). The two-layered VP-shell includes *v* that has an external theta-role (Agent) to be assigned to its Spec and takes a simple intransitive verb with an internal θ -role (usually Theme) as its complement (see Ura (2003) for discussion of Agr-based and Agr-less Case theories).

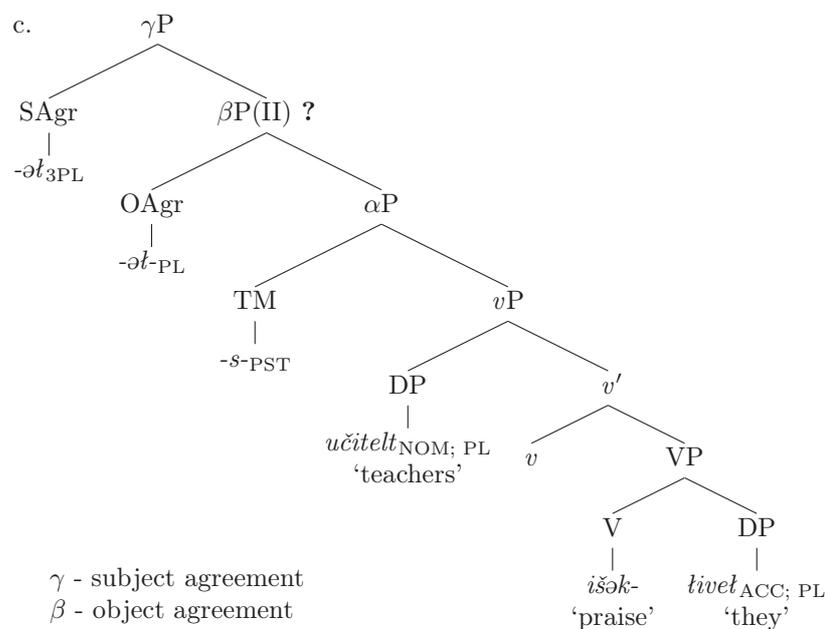
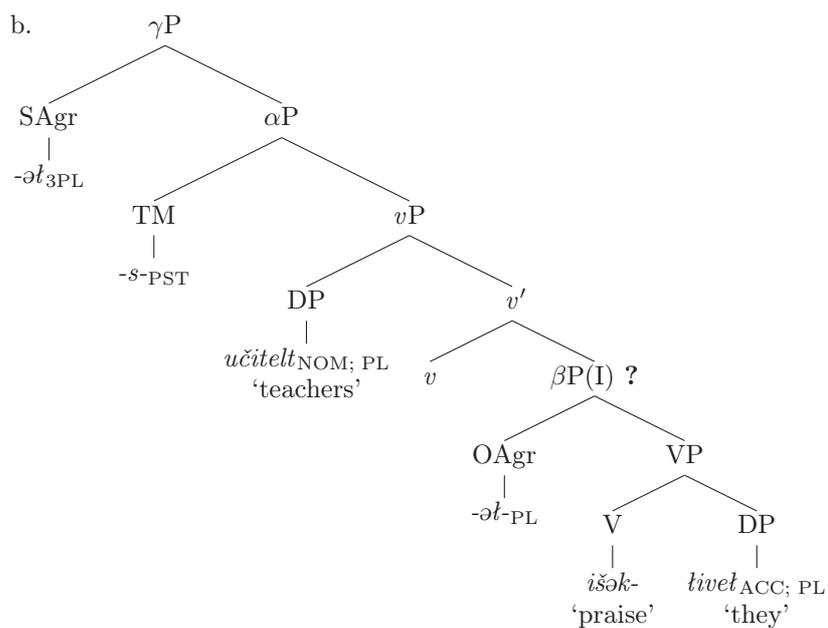
The conceptual argument Chomsky (1995) raised against AgrO is not applicable to object agreement in Khanty as it exists. Following the traditional understanding of AgrO, it has to be situated lower than T: either below *v*, or above it. For the present analysis of object agreement the disadvantage of this view is that it does not reflect the order of morphemes on the verb – cf. (3b) repeated here as (21). The tense marker in Khanty is always situated immediately after the verb stem (see section 2.1.3). If we assume that a tense marker in Khanty is an exponent of T, with TP being the highest functional projection, it would sit rather high on the tree (22b).

$$(21) \text{ Subject}_{[\text{Pers};\text{Num}]} \text{ Object}_{[\text{Pers};\text{Num}]} \text{ Verb-T-O}_{\text{NUM-SPEERS};\text{NUM}} = (3b)$$

The diagram shows the morpheme order: Subject_[Pers;Num] Object_[Pers;Num] Verb-T-O_{NUM-SPEERS;NUM}. Two curved arrows originate from the Subject and Object markers and point to the T marker within the Verb structure.

That is why in the present work I will stay agnostic as to which functional head contains the object agreement. Only, it is crucial that, as is shown by (21), it intervenes between subject agreement and the object. For sake of concreteness I will base my analysis on Baker's Mirror Principle (Baker 1985) and a standard assumption that the surface morpheme order is derived via successive-cyclic head-movement. Both subject and object agreement markers are separated from the verb stem by the tense marker. Hence, the functional projections containing subject and object agreement should be higher on the spine than TP. Further, the object agreement marker is situated between the subject agreement marker and the tense marker (cf. table 2.3), thus the respective functional projection should be positioned on the spine above the TP, but below the functional projection containing the subject agreement.

- (22) a. Učitel-t_i liveḥ_k išək-s-əł-əł.
 teacher-PL they.ACC praise-PST-PL-3PL
The teachers praised them.



The trees in (22b)-(22c) for the sentence in (22a) show two possible positions for object agreement: β P(I) in (22b) is a canonical low AgrO position; β P(II) in (22c) is modulo the Mirror Principle. Note, that it is conceivable that both are correct and that the high position of object agreement is derived from the low position by movement, but for current purposes I can leave this issue open. Subsequent leftward movement of subject and object then yields the observed word order.

I will now show that, similarly to Frisian (see discussion in section 1.3.4), in Khanty the conditions for combining the pronoun *tuvel* and the subject into a syntactic chain are not met, though for reasons that are different at the ‘micro-level’. Informally speaking, irrespective of its precise position, the overtly expressed object agreement intervenes between subject agreement and the pronoun, thus preventing chain formation – cf. (22c). In fact, at the stage when subject agreement (γ) comes into play, object agreement (β) will already have checked any syntactic property of the pronoun (e. g. structural Case) that would have made it visible. Hence the pronoun *tuvel* is never in a configuration to form a chain with the subject, the derivation is not cancelled, and the 3rd person pronominal can be variable bound at the C-I interface.

If there is no object agreement on the verb, nothing prevents creating a chain between the pronoun *tuvel* and the subject of clause. However, as discussed for example (20c), such a chain would lead to overwriting the number ϕ -feature on the 3rd person pronominal. That would be a violation of the principle of the recoverability of deletions. Hence, a derivation is cancelled and rejection is final.

2.4 Satisfying the IDI

2.4.1 Covert doubling

In the previous two sections we saw that in order to license a reflexive interpretation in Khanty, two conditions must be met. First, there must be object agreement on the verb, and second, there must be an overt pronominal present. The latter fact is crucial, because, as mentioned in section 2.1.3, object agreement can license object drop, but in isolation it does not license reflexivity. This fact alone confirms that there is no brute force reflexivization in Tegi Khanty. As discussed in section 1.3.2, one of the ways to satisfy the IDI constraint is by adding complexity to the object argument and, thus, protecting the variable. The simplest way to bring these factors together is as follows:

- (1) Object agreement licenses a null object pronoun.
- (2) The overt *tuvel* forms a constituent with the null object.

For current purposes we may stay agnostic about whether *tuvel* is adjoined to the null object pronoun or in the specifier position to it (note, that in (23) it

is adjoined; as a specifier it would precede the null pronoun). The crucial point is that there is complexity⁶. Thus, the structure of (20e) under its reflexive interpretation is (23), with \emptyset licensed by object agreement:

- (23) Utɬiteχo_i [\emptyset ɬuvel]_i išək-s-əlle.
 teacher \emptyset he.ACC praise-PST-SG.3SG
The teacher praised himself.

What is the nature of the null object pronoun? There are two options. On the one hand, the object agreement in Tegi Khanty could instantiate an incorporated pronominal argument (see Jelinek (1984); Bresnan and Mchombo (1987) on this analysis of object agreement). In this case object agreement always licenses a null object, and the full DP realization of the internal argument occupies an adjunct position and is characterized by a relatively free position in terms of word order and movement options. In her study of the Sob idiom of Obdorsk dialect, Nikolaeva (1999b) notes that objects triggering object agreement on the verb are indeed less constrained in terms of the syntactic position in comparison to the objects that do not trigger object agreement. However, she argues at length that Khanty is not a pronominal argument language based on the case assignment properties, locality and feature specification of Khanty object agreement.

Assuming that Khanty is not a pronominal object language (that is, no empty pronominal is projected in the case of a standard DP object in combination with object agreement), one could say that nothing enforces an empty pronominal to be projected in case of a pronominal object triggering object agreement. Concretely, a null object is licensed by the presence of object agreement, but not enforced. Given that, I hypothesize that the string *ɬuvel* *V* is ambiguous between [\emptyset *ɬuvel*] *V* and bare *ɬuvel* *V*. Hence, a pronominal can allow non-local binding, because like any other argument DP it can just trigger object agreement without a null pronominal being projected.

It is important to distinguish the chain issues and the effects of IDI. For the former, a mechanism preventing chain formation between the subject and the direct object (whether a null pronoun or *ɬuvel*) was needed. Such a mechanism is instantiated by object agreement. To avoid the IDI, complexity should be added to the object to protect the occurrence of the variable and make it distinguishable from its other occurrence. That is the role played by the combination [\emptyset *ɬuvel*]. The object agreement in combination with a null pronoun does not

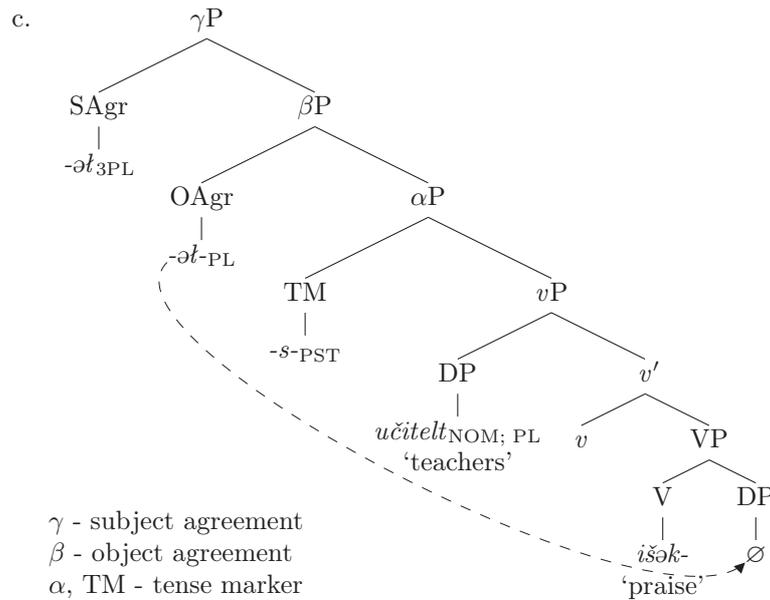
⁶Our analysis is supported by the fact that *ɬuvel* can be used as an intensifier, although some speakers do not agree to that (note that as an intensifier it should be stressable, hence in this capacity it cannot be null).

- (i) Jelp škola puš-s-ə(t) Komarova luv joχtis.
 new school open-PST-3PL Komarova he come-PST.3SG
 {LC: Komarova is the governor of the Khanty-Mansijsk Autonomous Okrug.} *Ko-*
marova herself came for the opening of the new school.

constitute a protecting environment, which is why object drop alone in Khanty can never have a reflexive interpretation.

In (24a)⁷ object agreement licenses a null object pronoun. It also prevents chain formation between the subject and the object. However, if the object were locally bound as in (24b), that would violate IDI, as nothing protects the second occurrence of the variable.

- (24) a. Učitel- t_i \emptyset_k išək-s-əł-əł.
 teacher-PL \emptyset praise-PST-PL-3PL
The teachers praised them.
- b. *Učitel- t_i \emptyset_i išək-s-əł-əł.
 teacher-PL \emptyset praise-PST-PL-3PL
 Int.: The teachers praised themselves.



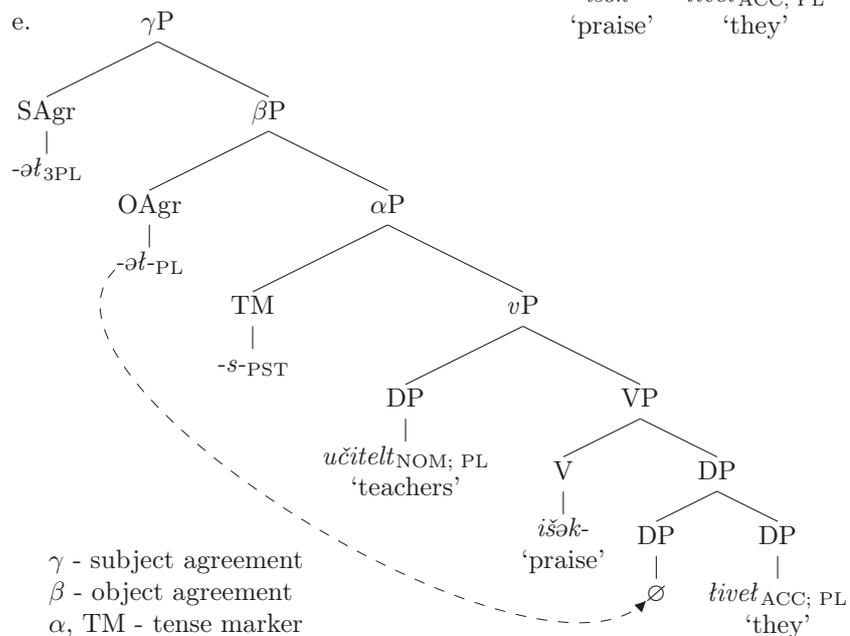
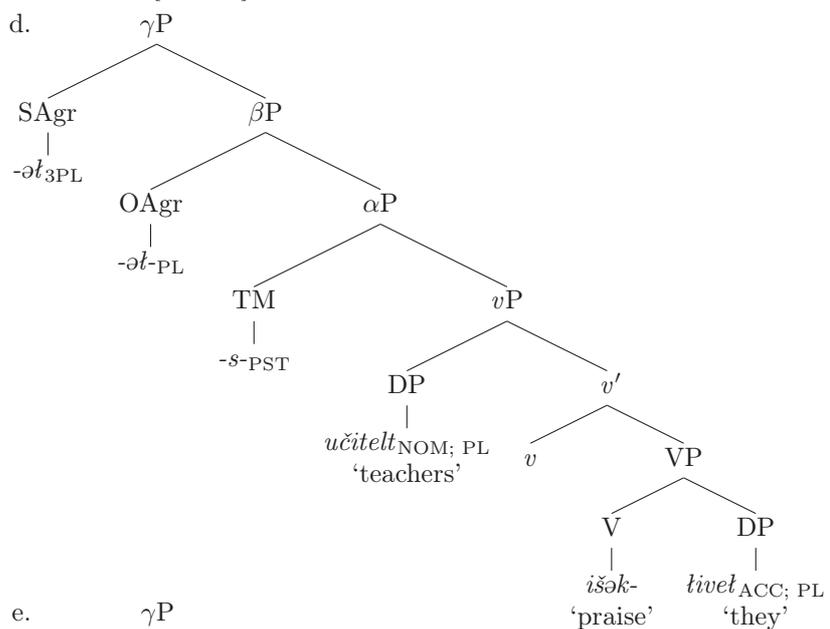
The sentence with a locally bound 3rd person plural pronoun *tivet* in (25a) is ambiguous between two syntactic structures – (25b) with bare *tivet* and (25c) with a null object pronoun licensed by object agreement and *tivet* adjoined to it. The syntactic structure in (25b) also shown as a tree in (25d) would violate IDI. Only the complex structure in (25c) also shown as a tree in (25e) satisfies IDI. It also prevents chain formation between *tivet* and the subject. One might argue that the pronoun in this structure is an adjunct and thus not visible to chain formation anyway, note, however, that adjuncts of this type require case matching.

⁷Examples in (24) are constructed for ease of exposition based on (3a) and the assumption that object agreement facilitates object drop as exemplified by (5).

(25) a. Učitel-t_i liveł_i išək-s-əł-əł.
 teacher-PL they.ACC praise-PST-PL-3PL
The teachers praised them.

b. Učitel-t_i liveł_i išək-s-əł-əł.

c. Učitel-t_i [∅ liveł_i]_i išək-s-əł-əł.



It is interesting to consider what happens if object agreement projects a null argument and instead of *tuvel* adjoining to it another contentful DP is adjoined. This is an issue that generally arises with adjoined intensifiers. For instance, in English we do have *He himself came*, but not *He the man came*. This option must be blocked by a principle that limits such adjunction to elements that allow an intensification reading. Adjoining a full DP is not interpretable in the absence of a proper interpretation rule.

A possible further question would be: what would block formal complexity by two null-elements (as in (26))?

- (26) *Ut̩t̩iteχo_i [∅ ∅]_i iʂək-s-əlle.
 teacher ∅ ∅ praise-PST-SG.3SG
 Int.: The teacher praised himself.

This would be problematic for the following reasons. First of all, it seems dubious that there could be null intensifiers at all. Second, the licensing of the null pronominal by object agreement should depend on an agree-relation, which for general reasons can only involve the head position of the object, and not its satellites. There is no evidence that an independent licensing mechanism exists for satellites. Third, having two null-elements in this domain would violate the general principle banning non-distinct elements in a local domain, of which IDI is a subcase. Thus, there is no reason to think this case can arise.

Another issue worth discussing is dative objects. Example (27) shows the pronominal *tuvel* as a dative object of the verb *evəlti* ‘trust’: it allows both a bound and a disjoint reading. How is the variable protected in this case and could there be a chain formation violation?⁸

Note, first of all that cross-linguistically dative objects show a variable behavior, depending on differences in case licensing and their relation to augment structure (as is also expressed by the hierarchy in Testelefs and Toldova (1998)). Even in English certain types of dative objects allow local binding of pronominals (Webelhuth and Dannenberg (2006), see also Reuland (2011: 382 n. 10)). As illustrated in (27), Dative in Khanty is expressed by the morpheme *-a* appended to the accusative form *tuvel* (cf. table 2.1), with the structure indicated in (27b). Here the Dative *-a* morpheme is realized on top of the accusative form *tuvel*, and *-a* is in a position comparable to that of a preposition. The simplest assumption is that *-a* licenses *tuvel*’s case. If so, the latter is invisible for probing from the outside, and chain condition effects are not expected. Whether IDI effects are to be expected depends on the precise relation of the dative object to the verbal grid, and specifically the role of *-a*. Two possible factors might play a role, and although each of them would be sufficient, they do not exclude each other.

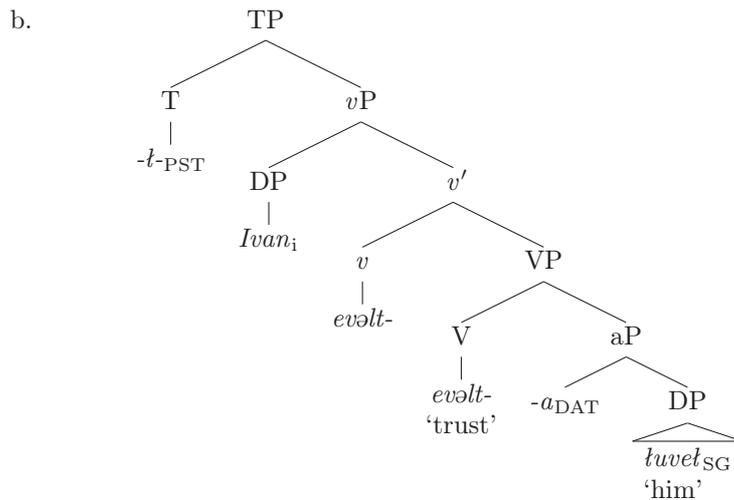
If we assume for Khanty that the head *a* defines a projection that is separate from the main verb, the variable will not be on the same grid as its binder,

⁸Thanks to Maria Polinsky for pointing out this issue to me.

creating separation. This is in fact the strategy applied in Zande (Niger-Congo), where in reflexives the object argument is realized in a PP (Schladt (2000), see also Schadler (2014)). This is also the case where French allows locally bound pronominals, as in *Jean est fier de lui* 'Jean is proud of himself', where *Jean* and *lui* are not on the same grid, unlike in its Dutch counterpart (see Reuland (2006, 2011) for discussion).

Furthermore, as is shown by the surface form, *tuvel* subsequently moves to the left of *-a*. I have insufficient evidence at this point to determine the nature of this position. However, if it is an A'-position rather than an A-position, this would also suffice to create complexity. (But note that separation is enough for the result to be derived.)

- (27) a. Ivan_i tuvel_{i/k} evølt-ɩ.
 Ivan he.DAT trust-NPST.3SG
Ivan trusts himself.



To derive the surface order a further leftward movement of subject and object will have to be assumed, as is standard.

The proposed analysis of the use of *tuvel* is fully applicable to other varieties of Khanty. It also gets further support from a certain quirk of Tegi Khanty, namely the optional use of an overt doubling strategy in the form of *tuw tuvel*.

2.4.2 Overt doubling

Tegi Khanty speakers sometimes use a reflexive strategy with overt doubling – a reflexive strategy previously unattested for Khanty. They double the pronominal *tuw* 'he' to create a reflexivizer *tuw tuvel*: the first element of it copies the case of the antecedent, and the second checks the local case. This strategy is optional in the sense that in all the cases where *tuw tuvel* is used to convey a

reflexive relation it is interchangeable with the the locally bound pronominal in combination with the object agreement on the verb.

- (28) Maša jast-əs Ivan-a što [tuv tuvet] išək-ł-əłhe.
 Masha say-PST.3SG Ivan-DAT that he he.ACC praise-NPST-SG.3SG
Masha said to Ivan that he praises himself.

Not all speakers agree on the obligatoriness of the reflexive interpretation in (28), rather suggesting an interpretation depending on the context. The confound factor here is the possibility of having a null subject, which allows for two different syntactic configurations for the sentence:

- where *tuv* is the subject of the embedded clause, and *tuvet* is the object;
- where subject is null, and *tuv tuvet* is the object.

Hence, although interesting, this fact is not conclusive. However, in the following configuration this ambiguity is eliminated, and here *tuv tuvet* reflexivizes the predicate even in a pragmatically nonfavorable context:

- (29) a. Vas'a-jøn Maša-jøn par-s-əłhe huvel_{v/*m} łap-ti.
 Vasja-2SG Masha-2SG ask-PST-SG.3SG he.ACC feed-INF
Vasja asked Masha to feed him.
 b. ?Vas'a-jøn Maša-jøn par-s-əlle tuv huvel_{m/*v} łap-ti.
 Vasja-2SG Masha-2SG ask-PST-SG.3SG he he.ACC feed-INF
Vasja asked Masha to feed herself.

While in (29a) for pragmatic reasons the only interpretation for *tuvet* is the subject of the matrix clause, in (29b) the doubled pronoun *tuv tuvet* can be interpreted only locally, which, as the speaker noted, makes the sentence "sound funny" (in Russian and presumably in Khanty *feed oneself* can be used only in the sense 'earn enough money to buy food for oneself', but not in the sense 'consume food').

The reflexivizer *tuv tuvet* can occupy not only co-argument positions, as in (29), but also adjunct positions in the postpositional phrases.

- (30) a. Nemxojat tuv tuv vörηala änt potərt-əs.
 no.one he he with NEG talk-PST.3SG
No one said anything about himself.
 b. Maša-jøn_m op-əłs piłn tuv tuv_{m/?*s} oηjalη potərt-əs.
 Masha-2SG sister-3SG with he he about talk-PST.3SG
Masha talked with her sister about herself.

To sum up, *tuv tuvet* must be locally bound within the minimal clause (29b), where it can occupy both coargument and non-coargument positions. It is also subject oriented – cf. (30b). I thus conclude that *tuv tuvet* is an obligatory reflexivizer that not only licenses reflexivity but also enforces it.

How does *luv luvet* enforce reflexivity in the relevant contexts? Here I pursue a parallel with Tsaxur suggested by Toldova (p. c.): in case of *luv luvet* the first element has the case of antecedent and the second one – the local case. The pronoun *luv* needs to get the case licensed. The nearest licenser that is compatible is T_{AGRS}, consequently the feature sharing creates a dependency with subject (thus, the subject orientation) and enforces the dependency.

Speakers show some preference for selecting the doubled form *luv luvet* as the locally bound object of subject experiencer (know-type) verbs (31) although not obligatory. It is used less often with the agent-theme verbs (32).

- (31) a. Maša-jøn_m Pet'a-jøn_{a_p} nõt-s. Pa Pet'a-jøn-a
 Masha-2SG Petja-2SG-DAT help-PST.3SG and Petja-2SG-DAT
 nõt-əm veraln luv luvet_{m/*_p} evølt-ł.
 help-PFT.PART after he he.ACC trust-NPST.3SG
Masha helped Petja. After (she) helped Petja, she trusts herself.
- b. Maša-jøn_m Pet'a-jøn-a_p nõt-s. Pa Pet'a-jøn-a
 Masha-2SG Petja-2SG-DAT help-PST.3SG and Petja-2SG-DAT
 nõt-əm veraln luvet_{p/?_m} evølt-ł.
 help-PFT.PART after he he.ACC trust-NPST.3SG
Masha helped Petja. After (she) helped Petja, she trusts him.
- (32) Maša_m nõt-l Pet'a-ja_p. Luv_{m/p} luvet_{p/m} išk-s-øłe.
 Masha help-NPST.3SG Petja-DAT he he.ACC praise-PST-3SG.SG
Masha help Petja. S/he praises him / herself.

The contrast between agent-theme verbs (*wash, praise*) and subject-experiencer verbs (*know, trust*) indicates that in Tegi Khanty – just like in the other languages that have been investigated in this respect – subject-experiencer verbs favour – but do not require – a more explicit marking.

This strategy has not been reported before. It could be due to the fact that the form was not thought to be particularly noteworthy, and its interpretation escaped attention. It could also be that it reflects a recent development following the changes in the language under the pressure of Russian. Further instances of such pressure are the fact that the object triggering object agreement has (partially) lost its properties (cf. the Sob idiom described by Nikolaeva (1999b), Russian does not have object agreement) and the newly developed ability of the non-specific quantified expressions to occur as subjects, which is ungrammatical for the variety of language described by Nikolaeva (1999b). As object agreement is crucial to licensing reflexivity with a locally bound pronominal, its disruption would lead to the compensatory development of the new strategy.

2.5 Summary

In this chapter I gave an overview of binding in Tegi Khanty. There are three reflexive strategies employed in this language.

A detransitivising suffix *-ijl-* is used with a closed subclass of agent-theme verbs. When combined with *-ijl-*, the verb undergoes a bundling operation that reduces the internal argument of the predicate and creates a complex agent-theme role. The reduction of the internal argument is evidenced with the help of Jackendoff's wax museum context: if there is no object, it cannot have a proxy reading. The only argument left keeps properties of both agent and theme.

Further, I thoroughly discussed the use of locally bound pronominals in Khanty to express a reflexive relation and offered an account for it. The key factor here is the object agreement which prevents chain formation. It also licenses a null pronoun which together with the overt pronoun *tuwet* creates a doubling structure thus protecting the variable. In this way the IDI condition is satisfied. The account proposed in this chapter is supported by the use of overt doubling strategy in Tegi Khanty – a reflexive strategy previously unattested for in Khanty. The pronominal *tuw* 'he' is doubled to create a reflexivizer *tuw tuwet*: the first element of it copies the case of the antecedent, and the second checks the local case. This strategy is optional in the sense that in all the cases where *tuw tuwet* is used to convey a reflexive relation, it is interchangeable with the locally bound pronominal in combination with the object agreement on the verb. The analysis I argue for is fully applicable to other varieties of Khanty that do not show overt doubling.

Does the array of facts presented for Khanty allow us to choose between theories discussed in chapter 1? As noted in section 1.4.1, it is wired in Schlenker's 2005 approach to binding theory that pronominals cannot be locally bound (Non-Redundancy). Thus, his account is not compatible with the Khanty data (just like it is incompatible with Frisian) unless supplemented with a syntactic component that would be equivalent to the present proposal.

Levinson (2000) suggests that pronominals can be bound if there is no more pragmatically dedicated competitor. Rooryck and Vanden Wyngaerd (2011) in a proposal to account for the local binding of 1st and 2nd person pronouns in Germanic and Romance argue that pronouns behave like anaphors when a dedicated class of reflexive pronouns is lacking (Rooryck and Vanden Wyngaerd 2011: 19, Absence of Principle B effects)⁹. Such approaches would not help clarify the situation with Khanty pronominals, and the necessity of object agreement to license a reflexive interpretation would stay unaccounted for.

A competition theory of derived complementarity (Safir 2004) suffers from a similar problem. While Safir's approach fares well for languages with several

⁹Note that even in the case of Germanic and Romance this principle faces problems, since in fact there are dedicated reflexive forms, such as *mijzelf*, etc., in Dutch, and *mysels*, *dysels*, *himsels*, etc. in Frisian.

dependent forms in complementary distribution, it does not provide the tools to analyse languages with no visible competition, or where ‘specialized’ and less ‘specialized’ forms coexist in a binding environment (like *ʈw ʈwet* and *ʈwet*).

Hornstein (2000) bases his take on binding on movement-chains. In his approach, an anaphor is the morphological offspring of a copy of the antecedent, which in cases of local binding can surface as a reflexive. His theory does not take into account the various morphological realizations reflexivity can take across languages like verbal reflexives, for instance, thus being inapplicable to Khanty.

On balance, none of the competing approaches have anything to say about the interplay between object agreement and pronominals, as the relevant factor does not reside in the bound element itself.

CHAPTER 3

Meadow Mari

3.1 Language profile

Meadow Mari [mhr] (also known as Cheremis, Eastern Mari, Low Mari, or Lugovo Mari) belongs to the Uralic language family. The ethnic Mari population in Russian Federation totals almost 548,000 (2010 census). About two thirds of them (388,000 people) list Mari as their native language (Lewis et al. 2013)¹. 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 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 and palatalization. The basic word order for Mari is SOV. The language has a large set of morphological cases (due to the use of local cases) and uses postpositions. Meadow Mari lacks grammatical gender.

¹Census 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 2002 census.

In the verbal domain the verb obligatorily agrees with the subject in person and number and distinguishes three tenses: presence, past and narrative past. Meadow Mari employs two reflexive strategies. The verbal strategy is realized by the detransitivizing suffixes *-alt* and *-əlt-*. The nominal one is represented by a complex reflexive *škenžəm ške*, a semi-reflexive *škenže* and a bare form *ške*. A demonstrative pronoun *tudo* ‘that, the other’ is used as a 3rd person pronominal.

The essential part of the morphological make-up of the anaphoric pronoun *škenže*² in Meadow Mari is that it carries possessive markers, that agree in person and number with the antecedent. In the next section we will have a closer look at these creatures.

3.2 Possessive suffixes

In Meadow Mari the possessive is realized as a bound morpheme affixed to the head of the possessed nominal phrase (1)-(2) and inflecting for number and person. In (1) the 3rd person singular possessive marker *-že* is attached to the possessed noun *pij* ‘dog’ referring to the possessor *poškudo* ‘neighbour’. In (2) the word *mašin-ž-əm* ‘car-P.3SG-ACC’ also contains a 3rd person singular possessive marker, and, according to the speakers, it denotes a car that can belong to Vanja or to someone else mentioned previously.

- (1) *poškud-ən pij-že*
neighbour-GEN dog-P.3SG
neighbour’s dog
- (2) *Van’a_i mašin-ž_{i/j}-əm garaž-eš šogalt-en.*
Vanja car-P.3SG-ACC garage-LAT put-PRT
Vanja put his car into the garage (his own or someone else’s).

The semi-reflexive *škenže* is reminiscent in its structure of possessive noun phrases. The table 3.1 presents a comparison of the declension of the semi-reflexive *škenže* and of the noun *üdər*, both marked for 3rd person singular. Given that *škenže* has the structure of a possessed noun, it is important to investigate how possessive suffixes work in Meadow Mari to understand what they contribute to the behaviour of the semi-reflexive.

3.2.1 Syntactic properties

In many respects Mari possessive suffixes behave as pronominals. Example (3) shows that possessive markers in Meadow Mari can be bound by a quantified

²The form *škenže* is Nominative, but it is only used in the postpositional phrases. The default form is *ške* or *škeže*, however, bare *ške* is also used as an intensifier and a possessive reflexive, hence I use *škenže* to disambiguate.

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

Table 3.1: Paradigms for *škenže* and *üdəržö* ‘his/her girl, daughter’

antecedent. The sentence in (4) illustrates that a possessive marker allows both strict and sloppy readings, and hence, as discussed in section 1.3.3, the dependency between the antecedent and the 3rd person singular possessive marker *-že* can be binding or coreference.

- (3) Kažne_i joča-ž_{i/k}-əm jorat-a.
 everyone child-3SG-ACC love-PRS.3SG
Everyone loves his child.
- (4) Jəvan vele kuva-ž-əm pagal-a.
 Ivan only old.wife-3SG-ACC respect-PRS.3SG
Only Ivan respects his wife. (OK_{strict}, OK_{sloppy})

The possessor can be expressed in the same nominal phrase, as in (1), or external to it: mentioned within the clause or in the previous context (2)-(4). If the position of the genitive possessor (SpecPossP) is filled, it obligatorily binds the 3rd person possessive marker.

- (5) Vaslij_i Pötər-ən_p pört-š_{p/*i}-əm pog-en nal-ən.
 Vasilij Peter-GEN house-P.3SG-ACC collect-PRT take-PRT
Vasilij took away Peter's own house.

If the genitive possessor differs from the possessive marker in its person and number specification, the sentence is illicit. In example (6a) the genitive possessive and the possessive marker are both valued for the 1st person, but differ in number: the genitive possessor is 1SG, while the possessive marker is 1PL. Example (6b) illustrates the discrepancy in person: the genitive possessor is 3SG, and the possessive marker is 1SG. Example (6c) shows that in 3rd person if the genitive possessor is in singular and the possessive suffix is marked for plural, the sentence is also illicit, much like in first person (6a).

- (6) a. ?*Peter məj-ən uškal-na-m mu-ən.
 Peter I-GEN cow-P.1PL-ACC find-PRT
 Int.: Peter found my cow of ours.

- b. ?*Peter tud-ən uškal-em mu-ən.
Peter he-GEN cow-P.1SG find-PRT
Int.: Peter found his cow of mine.
- c. ?*Peter tud-ən uškal-əšt-əm mu-ən.
Peter he-GEN cow-P.3PL-ACC find-PRT
Int.: Peter found his cow of theirs.

If the genitive possessor position is not filled, the 3rd person possessive markers look for an antecedent that would match in person and number. They do not have any antecedent preferences. In (7) both arguments of the verb can serve as the antecedent of the 3rd person singular possessive suffix *-že* marking the word *imne* ‘horse’.

- (7) A məj kol-ən-am Vaslij; Jəvan-lan; imne-ž_{i/j}-əm pu-ən.
and I hear-PRT-1SG Vasilij Ivan-DAT horse-P.3SG-ACC give-PRT
And I heard, Vasilij gave Ivan his horse.

Possessive markers in Meadow Mari allow split antecedents and inclusive reference. In (8) the 3rd person plural possessive marker *-əšt-* can have a split antecedent reading referring to both Masha and Ivan or it can be interpreted as referring to Masha and some other people, instantiating inclusive reference.

- (8) Maša_m Jəvan-lan; fotografij-əšt_{m+j/m+...}-əm ončəkt-a.
Masha Ivan-DAT photo-P.3PL-ACC show-PRS.3SG
Masha showed Ivan their photos.

Example (9) shows that if there is an antecedent matching in person and number, the 3rd person possessive suffix *-əšt-* would pick it, making the split antecedent reading implausible³. However, if there is no antecedent matching in person and number with the possessive 3rd person marker (8), it gets a split antecedent reading.

- (9) Maša_m üdər-vlak-lan_u fotografij-əšt_{u/?m+u}-əm onč’-əkt-en.
Masha girl-PL-DAT photo-3PL-ACC see-TR-PRT
Masha showed the girls their photo.

In contrast to personal pronouns (10a)⁴ the possessive suffixes in Meadow Mari cannot be used deictically (10b). This property is shared by 1st and 3rd person suffixes alike.

- (10) a. Tide kö-n pört-še? – Teve tud-ən. / Tud-ən.
this who-GEN house-3SG – DM he-GEN / he-GEN
Whose house is that? – This one’s. / His (with a deictic gesture).

³It has been established in a number of experimental studies that picking up an antecedent from discourse is more costly than receiving a value by binding (Koornneef 2008; Koornneef et al. 2011).

⁴DM = deictic marker.

- b. Tide kö-n pört-še? – *Pört-em. / Məj-ən.
 this who-GEN house-3SG – house-1SG / I-GEN
Whose house is that? – Mine.

3.2.2 Possessive markers in PPs

When combined with a postposition possessive markers can be used anaphorically (Egorushkin 2000), as illustrated in example (11). In the first sentence we see a full postpositional phrase *tide klat ümbake* ‘on top of this barn’. In the second sentence the postposition *jəmalnəže* ‘at the bottom’ does not have a nominal complement, but instead contains a 3rd person singular possessive marker *-(ə)že*, that refers to the barn, mentioned in the previous context. I follow Simonenko and Leontjev (2012) in assuming that the postpositions in Finno-Ugric languages are grammaticalized nominals (N_{place}) that lost the ability to take non-local cases⁵.

- (11) Tide klat ümba-ke küz-en šinč’-ən-am no. A jəma-lnə-že...
 this barn top-ILL climb-CONV sit-PRT-1SG so and bottom-INESS-3SG
 me ožnə-žo vet pog-ena əl’e makulatur-əm,
 we earlier-3SG but collect-PRS.1SG be-NARR.3SG paper.for.recycling-ACC
 metallolom-əm vot...
 metal.for.recycling-ACC so
*So, I climbed on top of this barn. And under it... we used to collect paper
 and metal for recycling...* (FUCorpora)

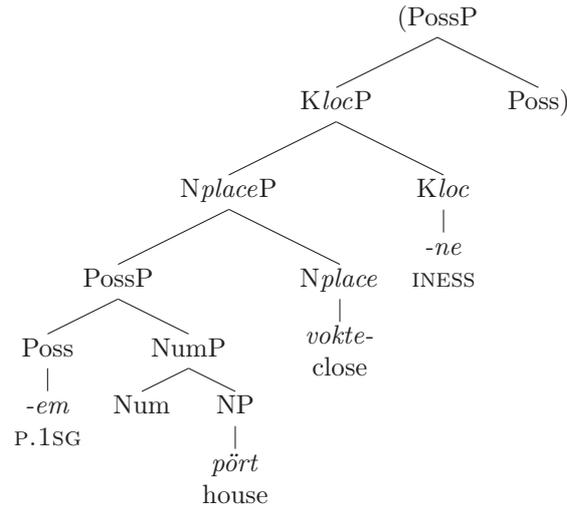
If a nominal complement of a postposition is a possessive phrase, the possessive marker can be attached to the head noun (12a) or to the postposition (12b), but not to both of them simultaneously (12c).

- (12) a. Tide pušəŋge məj-ən pört-em vokte-ne kušk-eš.
 this tree I-GEN house-P.1SG close-INESS grow-PRS.3SG
This tree grow next to my house.
 b. Tide pušəŋge məj-ən pört vokte-ne-m kušk-eš.
 this tree I-GEN house close-INESS-P.1SG grow-PRS.3SG
This tree grow next to my house.
 c. *Tide pušəŋge məj-ən pört-em vokte-ne-m kušk-eš.
 this tree I-GEN house-P.1SG close-INESS-P.1SG grow-PRS.3SG
 Int.: This tree grow next to my house.

As the scheme (13) shows, postpositions are nominals that take PossP as their argument and can attach local cases and possessive suffixes. The top PossP is virtual as it is only realized if the possessive relation is not expressed downstairs.

⁵Many postpositions of localization in Mari take local cases.

(13) based on Simonenko and Leontjev (2012)



3.2.3 PossP and *škenže*

In (14), the possessive suffix *-əšt-* marks the subject of the clause *pöreŋəšt* /man-P.3PL/ ‘the men’ and the direct object *joləštəm* ‘their legs’. This sentence shows two different types of use of the 3rd person possessive suffix in Meadow Mari that should not be confused: In the former case in *pöreŋ-əšt* ‘man-P.3PL’, the possessive marker is used to express plurality and for discourse purposes, expressing contrast⁶. In the latter, it expresses a possessive relation between the subject and the object of the clause.

- (14) {*LC: Then, he (the hypnotist – A. V.) dehypnotized them. All the women stood with their skirts raised.*}
 Pöreŋ-əšt kol-əm kuč'-əšəla... jol-əšt-əm kuč'-ən-ət...
 man-P.3PL fish-ACC catch-CONV.SIM leg-P.3PL-ACC hold-PRT-3PL
As for the men that were catching fish they held their legs. (FUCorpora)

In the same fashion as in the latter case, the possessive marker in Meadow Mari is used within the anaphoric pronoun *škenže* expressing person and number of the antecedent.

⁶Possessive affixes in Uralic languages can have the following “non-possessive” functions according to Nikolaeva (2003): identifiability (the cognitive status of the referent, that the mental representation of it at the moment of utterance is the same for both the speaker and the hearer): only 3rd person singular markers; association with another object: 1st, 2nd, and 3rd person; emphasis/contrast: only 3rd person. See also the discussion in Simonenko (2013).

- (15) Nuno šken-əšt-əm / *ške pətar-a-t.
 they self-P.3PL-ACC / self harm-PRS-3PL
They harm themselves.

In (15), the semi-reflexive *šken-əšt-əm* contains a possessive suffix *-əšt-* that expresses 3rd person plural. It is not possible to omit the possessive marker both in the semi-reflexive and in the possessive NPs – both in (15) and in (16) omitting the possessive marker would make the phrase illicit.

- (16) Pötər-ən pört-*(š)-əm
 Peter-GEN house-P.3SG-ACC
Peter's house

In a postpositional phrase (PostP) in Meadow Mari, *škenže* behaves in the same way as a noun. In the phrase [semi-reflexive + postposition] the possessive marker can be attached either to the semi-reflexive (17a) or to the postposition (17b). The presence of two possessive markers – both on the postposition and on the pronoun – is ruled out. In the PostP, *škenže* (with a possessive marker) and bare form *ške* are distributed depending on the presence or absence of the possessive marker on the postposition.

- (17) a. Van'a_i Pet'a_j de-ne šken-že_i nergen üč'aš-en.
 Vanja Petja near-INESS self-P.3SG about argue-PRT
 b. Van'a_i Pet'a_j de-ne ške_i nergen-že üč'aš-en.
 Vanja Petja near-INESS self about-P.3SG argue-PRT
Vanja_i argued with Petja_j about himself_i.

This behaviour is typical for *nergen* 'about' (17) and the stressed postpositions of spatial localization (18). In the context of postpositions of spatial localization like *onč'əlan* 'in front of' or *vokteke* 'next to', the pronoun *ške* can be omitted, if the postposition bears a possessive marker (18c). This variant is considered most natural by the speakers.

- (18) a. Tudo toja-m šken-že onč'ə-lan sak-en.
 he stick-ACC self-P.3SG in.front.of-DAT hang-PRT
He hung a stick in front of himself.
 b. Maša kniga-m kəč'al-ən da tud-əm ške onč'əlnə-ž-ak
 Masha book-ACC search-PRT and he-ACC self in.front.of-P.3SG-EMPH
 mu-ən.
 find-PRT
Masha was looking for the book and found it right in front of herself.
 c. Üdər už-ən üstel ümbal-ne onč'əlnə-žo kniga-m.
 girl see-PRT table top-INESS in.front.of-P.3SG book-ACC
The girl saw the book on the table in front of her.

Given the array of facts presented in this section I conclude that possessive markers are an essential part of the morphological composition of the anaphoric pronoun *škenže*. They share many traits with pronominals but lack the ability to be used deictically. In this chapter 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 and (co-)reference. Possessive suffixes play an essential role in the way the anaphoric relationship between *škenže* and its antecedent is established.

3.3 Reflexive strategies

As was discussed in section 1.3, one of the central claims of Reuland (2011) is that the computational system of human language cannot handle identical variables in the co-argument domain (the Inability to Distinguish Indistinguishables – IDI). There are two ways to prevent the IDI from causing reflexive relations to be inexpressible. One is a *detransitivization* operation on the predicate involving the formation of a composite θ -role – *bundling* in the sense of Reinhart and Siloni (2005). The other is the insertion of material that keeps the arguments distinct creating a *protecting* environment for the variable.

- (19) 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 section 1.3.2 for discussion).

In this section I will provide an overview of the detransitivizing suffixes in Meadow Mari and describe the properties of the pronoun *škenze* that serves as a protecting strategy.

3.3.1 Verbal suffixes

A closed subclass of agent-theme verbs (mostly grooming and bodily functions) allows using detransitivizing suffixes *-əlt-* (20) and *-alt-* (21), which reduce the number of arguments. These suffixes are not phonological variants but two distinct suffixes which convey differing grammatical meanings (Kolomatskij 2011). The choice between *-alt-* and *-əlt-* seems to be purely lexical.

Examples (20)–(21) show that when detransitivizing suffixes *-əlt-* or *-alt-* are added to a transitive verb like *muškaš* ‘to wash’ or *aralaš* ‘to defend’, they reduce the arity of the verb and change its semantics so that it denotes a self-directed action, instantiating the bundling operation of the Theta System (Reinhart 2002; Marelj 2004; Reinhart and Siloni 2005).

- (20) a. Jəvan-ən ava-že küvar-əm mušk-ən.
Ivan-GEN mother-P.3SG floor-ACC wash-PRT
Ivan's mother washed the floor.
- b. Jəvan mušk-əlt-ən.
John wash-DETR-PRT
John washed.
- (21) a. Jəvan elna-m aral-en.
Ivan country-P.1PL-ACC defend-PRT
Ivan defended our homeland.
- b. Jəvan saj-ən aral-alt-ən.
Ivan good-ADV defend-DETR-PRT
Ivan defended himself well.

As discussed in section 1.3.2, bundling reduces the internal argument of a two-place predicate and bundles the internal role (theme) and the external role (agent) into a composite agent-theme role. There are several linguistic tests to provide evidence for the internal arity reduction. One of them is the unavailability of the proxy-readings (see discussion in section 2.2.1).

Example (22a) illustrates for Meadow Mari that a reflexive pronoun invokes not only a reflexive reading, but also a set of proxies associated with its antecedent, in this case a statue of Gorbachev. In contrast to that, once the verb *muškaš* ‘wash’ undergoes bundling marked by the suffix *-əlt-* (22b), the proxy-reading is no longer available, hence the verb is intransitive.

- (22) a. {LC: Gorbachev came too see the wax figures.}
Keneta (tudo) šken-ž-əm mušk-aš tüŋal-ən.
suddenly he self-P.3SG-ACC wash-INF start-PRT
Suddenly he started washing himself/the figure.
- b. {LC: Gorbachev came too see the wax figures.}
Keneta (tudo) mušk-əlt-aš tüŋal-ən.
suddenly he wash-DETR-INF start-PRT
*Suddenly he started washing (himself/*the figure).*

Adding the suffix *-əlt-* to the verb shows the same effect – cf. the contrast between (23a) and (23b). The verb carrying the suffix *-əlt-* does not allow a proxy reading (23a) and thus it does not project a syntactic object, unlike its transitive counterpart accompanied by the anaphoric pronoun (23b).

- (23) {LC: People were protesting against putting a monument of Gorbachev in front of the Museum of the New History of Russia.}
- a. Gorbač'ev muzej-əš aral-alt-aš tol-ən.
Gorbachev museum-LAT defend-DETR-INF come-PRT
*Gorbachev came to the museum to defend (himself/*the monument).*

- b. Gorbač'ev muzej-əš šken-ž-əm aral-aš tol-ən.
 Gorbachev museum-LAT self-P.3SG-ACC defend-INF come-PRT
Gorbachev came to the museum to defend himself/the monument.

Both *-əlt-* and *-alt-* can also introduce other operations on argument structure – they allow passive and impersonal readings⁷. A passive example is given in (24). The suffix *-alt-* also expresses middle (25).

- (24) Tengeč'e Pet'a osal pij de-ne pur-əlt-ən.
 yesterday Petja bad dog near-INESS bite-DETR-PRT
Yesterday Petja was bitten by a bad dog. (Kolomatskij 2011)
- (25) Tide kniga peš sajon lud-alt-eš.
 this book very good read-DETR-PRS.3SG
This book reads very well. (Kolomatskij 2011)

The suffixes *-alt* and *-əlt* do not enforce reciprocity (26), but can license it with inherently reciprocal verbs (27).

- (26) a. Üdər-vlak aral-alt-ən-ət.
 girl-PL defend-DETR-PRT-3PL
*The girls defended (themselves / *each other).*
- b. Üdər-vlak mušk-əlt-ən-ət.
 girl-PL wash-DETR-PRT-3PL
*The girls washed (themselves / *each other).*
- (27) Eŋ-vlak šupšal-alt-ət.
 man-PL kiss-DETR-PRS.3PL
People kiss.

Apart from marking the operations on argument structure, both *-əlt-* and *-alt-* also have aspectual meanings. The suffix *-əlt-* expresses frequentative, and *-alt-* conveys semelfactive⁸. The latter is shown in (28).

- (28) Meč'e kükšö töršt-alt-en.
 ball high jump-DETR-PRT
The ball jumped high. (Kolomatskij 2011)

⁷Such multiple use is widespread across languages, see e.g. Geniušiene (1987).

⁸It is worth mentioning that when the suffix *-alt-* is used as a detransitivizer, the resulting verb always belongs to the conjugation class I (ia). In contrast, if *-alt-* is used to express semelfactive, as in (28), the derived verb is always of the conjugation class II (ib).

- (i) a. *aral-aš* 'defend-INF' (*aral-em* 'defend-PRS.1SG'): conjugation class II → *aral-alt-aš* 'defend-DETR-INF' (*aral-alt-am* 'defend-DETR-PRS.1SG'): conjugation class I.
- b. *töršt-aš* 'jump-INF' (*töršt-em* 'jump-PRS.1SG'): conjugation class II → *töršt-alt-aš* 'jump(once)-DETR-INF' (*töršt-alt-em* 'jump(once)-DETR-PRS.1SG'): conjugation class II. (Kolomatskij 2011)

The suffixes *-alt-* and *-əlt-* are subject to combinatorial limitations: they can detransitivize a subclass of agent-theme verbs, but not subject experiencer verbs of the *admire*-type in line with Marelj (2004); Reinhart and Siloni (2005).

- (29) a. *už-aš* 'see-INF' – **už-alt-aš* / **už-əlt-aš* 'see-DETR-INF'
 b. *jorat-aš* 'love/like-INF' – **jorat-alt-aš* / **jorat-əlt-aš* 'love/like-DETR-INF'

If the combination of *-alt-* or *-əlt-* with a subject-experiencer verb is at all possible, they are used in their aspectual meanings and no valence reduction ensues – cf. (30a) and (30b). In (30b), the derived verb *tolaš-alt-aš* 'suffer-DETR' takes a postpositional object with *dene* just like *tolašaš* 'suffer' (30a) and belongs to the conjugation class II which indicates that the suffix *-alt-* is used to express semelfactive.

- (30) a. *Kuva ənde müškər de-ne tolaš-en kij-a.*
 old.woman now belly near-INESS suffer-CONV lie-PRS.3SG
Now the old woman is lying suffering from the belly (pain). (Galkin 2005)
 b. *Tudo vuj korštəmo de-ne tolaš-alt-a.*
 he head ache-NZR near-INESS suffer-DETR-PRS.3SG
He is suffering from a headache. (Kolomatskij 2011)

In this subsection I presented one of the ways to satisfy the IDI constraint of the computational system of human language in Meadow Mari, namely by means of a detransitivization operation on the predicate marked with the suffixes *-əlt-* and *-alt-*. The evidence for the reduction of the internal argument comes from unavailability of proxy-readings for the detransitivized predicates.

3.3.2 Škenžəm ške: Complex reflexive

To express that the arguments of the verb are covalued, Meadow Mari employs a semi-reflexive *škenže* and a complex structure derived from it – *škenžəm ške*. The latter is comprised of two forms: the pronoun *škenže* in the oblique case followed by a bare form *ške*. *Škenže* bears a possessive suffix and a case marker that are added to the oblique stem *šken-/ška-/ške-* (c.f. table 3.2). 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 3.1.

In Meadow Mari bare *ške* serves in two functions: it can be used as an intensifier and as a possessive reflexive. As an adnominal intensifier, *ške* can be situated both in front of the noun and after it.

Let us look closely at the complex reflexive *škenžəm ške*. It is justified to ask whether *škenžəm ške* is one constituent or not. The tests show that it must be one constituent. For instance, if we change the order of the elements of the complex reflexive *škenžəm ške*, it completely alters both the structure of the sentence and its interpretation.

In (31a), the complex reflexive *škenžəm ške* is covalued with the subject of the sentence, the NP *student-vlak* 'students'. In (31b), *ške* modifies the VP and serves as an intensifier, that highlights the fact that the students were acting on their own, without any help. Therefore the elements of the combination *škenžəm ške* are indisplaceable.

- (31) a. Student-vlak ška-lan-əšt ške kusarəše-vlak-əm [ojər-en
 student-PL self-DAT-P.3PL self interpretor-PL-ACC choose-CONV
 nal-ən-ət].
 take-PRT-3PL
The students chose the interpreters for themselves.
- b. Vujlatəše uke godəm student-vlak ške ška-lan-əšt
 supervisor no during student-PL self self-DAT-P.3PL
 kusarəše-vlak-əm [ojr-en nal-ən-ət].
 interpretor-PL-ACC choose-CONV take-PRT-3PL
*When the supervisor was absent the students chose the interpreters
 themselves.*

Further, if we try to insert an adverb in-between the elements of the complex reflexive *škenžəm ške*, the speakers of Meadow Mari either judge such sentences as ungrammatical (32a), or reinterpret them as containing an intensifier (32b).

- (32) a. Jəvan šken-ž-əm (*teŋgeč'e) ške (teŋgeč'e) aral-en.
 Ivan self-P.3SG-ACC yesterday self yesterday defend-PRT
Ivan defended himself yesterday.
- b. ?Jəvan šken-ž-əm teŋgeč'e ške aral-en.
 Ivan self-P.3SG-ACC yesterday self defend-PRT
Ivan defended himself yesterday himself.

If we try to topicalize *škenžəm ške*, the only way to do so is to move it to the left periphery as a whole. Example (33b) illustrates topicalization of *škenžəm ške*. As shown in (33c)-(33d) trying to dislocate parts of *škenžəm ške* renders illicit sentences.

- (33) a. Kažne šken-ž-əm ške jorat-a.
 every self-P.3SG-ACC self like-PRS.3SG
Everyone likes himself.
- b. Šken-ž-əm ške kažne jorat-a.
 self-P.3SG-ACC self every like-PRS.3SG
Himself everyone likes.

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

Table 3.2: The paradigm for *škenže*

- c. ?*Šken-ž-əm kažne ške jorat-a.
self-P.3SG-ACC every self like-PRS.3SG
Int.: Everyone likes himself.
- d. *Ške kažne šken-ž-əm jorat-a.
self every self-P.3SG-ACC like-PRS.3SG
Int.: Everyone likes himself.

The complex reflexive *škenžəm ške* also differs considerably from the semi-reflexive *škenže* in its binding properties (see below). Further, unlike the semi-reflexive *škenže*, the complex construction *škenžəm ške* does not allow split antecedents (34) and hence is a reflexive proper. I conclude that *škenžəm ške* is a constituent with its own unique properties.

- (34) *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.

Binding properties

The complex reflexive *škenžəm ške* is subject oriented, a property which it shares with *škenže*. It cannot be bound by a non-subject coargument.

- (35) a. ?*Petr memnam ška-lan-na ške onč'əkt-a.
Peter we.ACC self-DAT-P.1PL self show-PRS.3SG
Int.: Peter shows us to ourselves.
- b. ?*Petr məlanna šken-na-m ške onč'əkt-a.
Peter we.DAT self-P.1PL-ACC self show-PRS.3SG
Int.: Peter shows us to ourselves.
- c. Petr memnam məlanna onč'əkt-a.
Peter we.ACC we.DAT show-PRS.3SG
Peter shows us to ourselves.

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

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

In (36), the complex reflexive is an argument of the embedded infinitival clause *škanžə 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:

- (37) *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.

How does *škenžəm ške* enforce reflexivity? Following the analysis proposed by Reuland (2001, 2011) for SELF-anaphors (see discussion in section 1.3.2), I assume that *ške* can covertly move onto the verb by head to head movement. 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 denoting a relation between entities and their proxies (with the identity relation as the limiting case). Adjoining *ške* onto the predicate head imposes an identity restriction on its arguments. This explains the prohibition of split antecedents: if the arguments of the reflexive-marked verb do not match in features, the derivation crashes.

One of the arguments for the covert movement of *self* onto the verb in English is the exempt behaviour of *himself* in a coordinate structure, as in (38) (see discussion in section 1.3.2). While usually the English *himself* must be bound within simple clause, example (38) is perfectly licit. Due to the Coordinate Structure Constraint, *self* cannot be moved onto the verb enforcing reflexivity. Thus, in (38) *himself* is an exempt anaphor allowing a long-distance interpretation. In contrast, in Dutch, as discussed in section 1.3.4, the use of *zichzelf* in a similar context is illicit. The reason for it is the ϕ -feature deficiency of *zich*, which makes it a subject to independent binding requirements.

- (38) Mary_i thought that the king invited [Jack and herself_i] for tea.

In (39a), *šken-əšt-əm ške* is a part of a coordinate structure in the same vein as *herself* in (38). However, the Mari *šken-əšt-əm* must be bound within the finite clause – cf. (39b) – and hence, cannot be interpreted as referring to the subject of the main clause *üdər-vlak* ‘girls’. That is why, unlike in English and much like in Dutch, the Coordinate Structure Constraint in Meadow Mari⁹ does not supply independent evidence in support for the movement analysis of *ške*.

⁹The 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]?

- (39) 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.*

So, although *ške* cannot move onto the verb due to the Coordinate Structure Constraint, the second part of the complex reflexive *škenəštəm* has its own binding requirement which make (39a) illicit.

In this section we discussed the complex reflexive *škenžəm ške*. I assume it enforces reflexivity by a head to head movement of *ške* onto the verb, it 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.

3.3.3 The pronoun *škenže*

The Meadow Mari semi-reflexive *škenže* licenses reflexivity, but does not enforce it. It can signal the covaluation of the arguments and adjuncts of a predicate with its subject (40), but it also allows split antecedents.

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

Škenže bears a possessive suffix and a case marker that are added to the oblique stem *šken-/ška-/ške-*. The possessive marker agrees in number and person with the antecedent. Example (41a) shows that in a causative construction, if the SpecTP and the SpecvP bear the same person and number features they both can serve as the antecedents of the anaphoric pronoun *škenže*. If SpecTP and SpecvP differ in their person/number features like in (41b)-(41c), the ambiguity is resolved.

- (41) a. Pötər_p Jəvan-əm_j ška-lan-ž_{e_{p/j}} paša-m əšt-əkt-a.
 Peter Ivan-ACC self-DAT-P.3SG work-ACC do-TR-PRS.3SG
Peter forces Ivan to do job for him/himself.
- b. Məj_i tud-əm_j ške-m-əm_i mond-əkt-en-am.
 I he-DAT self-P.1SG-ACC forget-TR-PRT-1SG
I force him to forget me.

- c. Məj_i tud-əm_j šken-ž-əm_j mond-əkt-en-am.
 I he-ACC self-P.3SG-ACC forget-TR-PRT-1SG
I force him to forget himself.

Binding properties

The Meadow Mari pronoun *škenže* is subject oriented. In examples (42a)–(42b) the semi-reflexive bears a possessive suffix *-na-* ‘P.1PL’, thus requiring an antecedent in 1st person plural. The subject of the sentences *Petr* is 3rd person singular, and a 1st person plural pronoun occupies a DO position in (42a) and an IO position in (42b). As (42a)–(42b) show, speakers of Meadow Mari find non-subject antecedents for *škenže* problematic (although slightly better than for *škenžəm ške*).

- (42) a. ??Petr memnam ška-lan-na onč’əkt-a.
 Peter we.ACC self-DAT-P.1PL show-PRS.3SG
 Int.: Peter shows us to ourselves.
- b. ??Petr məlanna šken-na-m onč’əkt-a.
 Peter we.DAT self-P.1PL-ACC show-PRS.3SG
 Int.: Peter shows us to ourselves.
- c. Petr memnam məlanna onč’əkt-a.
 Peter we.ACC we.DAT show-PRS.3SG
Peter shows us to ourselves.

The pronoun *škenže* must be bound within the finite clause. When *škenže* occupies a position inside the embedded finite clause as in (43), it is bound locally by the subject of the embedded clause *Jəvan*, it cannot be bound by the matrix subject *Maša*.

- (43) Jəvan_i šken-ž-əm_i/*_m jorat-a, Maša_m šona.
 Ivan self-P.3SG-ACC like-PRS.3SG Masha think-PRS.3SG
*Masha thinks that Ivan likes himself / *her.*

When *škenže* fills a position inside an embedded infinitival clause, it can be bound locally by the PRO, or long-distance bound by the matrix subject. In (44) *škenže* is an argument of the embedded infinitival clause. If it is locally bound by the PRO, it gets covalued with its controller *rveze* ‘boy’. It can be also bound by the matrix subject of the sentence *ūdər* ‘girl’.

- (44) Ūdər_i rveze_j de-č’ [Ø_j ška-lan-že_i/_j pört-əm əšt-aš] jod-ən.
 girl boy near-EL PRO self-DAT-P.3SG house-ACC make-INF ask-PRT
The girl asked the boy to build her / himself a house.

The other types of non-finite embedded clauses in Meadow Mari are opaque for binding. If *škenže* occupies a position inside an embedded participial clause (45), a converb (46) or a nominalization (47), then it is always locally bound.

Example (45) illustrates that *škenže* in the internal argument position of the embedded participial clause cannot be bound by the matrix subject.

- (45) 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 (46), *škenže* occupies the 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.

- (46) [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 (47) *škenže* is the internal argument of the nominalization clause and cannot be bound by a matrix subject.

- (47) 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 (48). Example (48) illustrates that when *škenže* occupies the genitive possessor position of the nominalization clause it is bound by the matrix subject.

- (48) Jəvan_i šken-ž-ən_i [_{NzP} škol-əšto tunem-m-əž-əm] šarnalt-en.
 Ivan self-P.3SG-GEN school-INESS study-NZR-P.3SG-ACC recall-PRT
Ivan recalled his studies at school.

In this section I gave an overview of reflexive strategies employed in Meadow Mari from verbal suffixes *-əlt-* and *-alt-* to complex reflexive *škenžəm ške* to the semi-reflexive *škenže*. 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.

3.4 Split antecedents

3.4.1 Data

The pronoun *škenže* allows split antecedents (49), unlike the complex reflexive *škenžəm ške* (50).

- (49) 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).
- (50) *Maša Jəvan-lan šken-əšt-əm ške onč'-əkt-en.
 Masha Ivan-DAT self-P.3PL-ACC self see-TR-PRT
Masha showed Ivan them(selves).

It is not possible for *škenže* to have split antecedents across a finite clause boundary. In (51) the pronoun *škenəštəm* requires an antecedent in plural. We also know that *škenže* must be bound within the 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 (49)), hence it is likely that the sentence would be illicit. This prediction is borne out.

- (51) [*Vas'a šken-əšt-əm_{i+m/i+v} už-ən manən] Jəvan_i Maša-lan_j ojl-en.
 Vasja self-P.3PL-ACC see-PRT that Ivan Masha-DAT tell-PRT
 Int.: Ivan told Masha that Vasja saw them(selves).

In (52) *škenəštəm* requires a plural antecedent, but the conceivable split antecedents *Maša* and *Vas'a* are separated by a finite clause boundary. Just like in (51), the sentence is illicit.

- (52) ?*Maša_m [Vas'a_v šken-əšt-əm_{m+v} moka-a manən] šon-a.
 Masha Vasja self-P.3PL-ACC praise-PRS.3SG that think-PRS.3SG
 Int.: Masha thinks that Vasja praises them(selves).

The following examples illustrate the use of *škenže* with split antecedents across a non-finite clause boundary. Example (53) contains an embedded participial clause with the dative form *škanəšt* as one of its arguments, bearing a 3rd person plural possessive marker *-əšt-* and thus requiring a plural antecedent. The conceivable split antecedents in (53) would be either the pair *Jəvan* and *üdər* 'girl', both in the main clause, or the pair *Jəvan* in the main clause and PRO_{üdər} in the embedded clause. The former option should be illicit, because *škenže* cannot be bound across a participial clause boundary, and this prediction is borne out. For the latter to be illicit, we need to assume that if the conceivable split antecedents are separated by a clause boundary, it makes their combination illicit. This assumption can be checked based on the data from the infinitival clauses, which as we know from section 3.3.3 are transparent for binding *škenže* (54).

- (53) *Jəvan_i [ška-lan-əšt_{i+k} kniga-m nal-əše] üdər-əm_k ola-šte
 Ivan self-DAT-P.3PL book-ACC buy-PTCP.ACT girl-ACC city-INESS
 už-ən.
 see-PRT
 Int.: Ivan saw in the city the girl that bought the books for them(selves).

As example (54) shows, *škenže* cannot take split antecedents if they are separated by a clause boundary, even if it is an infinitival clause boundary. The indexes *i+kin* and *m+kin* stand for respectively Ivan or Masha and some associated set of relatives. Only these readings are available for *škenže* in (54).

- (54) Maša_m Jəvan-əmə_i [PRO_i šken-əšt-əmə_{i+kin/m+kin/??m+i} mōkt-aš] jōd-ən.
 Masha Ivan-ACC PRO self-P.3PL-ACC praise-INF ask-PRT
Masha asked Ivan to praise them(selves).

3.4.2 Analysis

How does *škenže* participate in licensing reflexivity, thus preventing the effect of IDI? Given that *škenže* allows split antecedents, it does not enforce reflexivity, in other words there is no encoding of a dependency in the narrow syntax via movement or chain formation. 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 (8) in section 1.3.1), 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.

The possessive suffix that agrees with the antecedent in ϕ -features instantiates a variable. The *šken-* part serves as a Morph from the structure in (3a) protecting the variable by keeping two variable tokens distinct. The element *ške* is a relational noun, and its only special property is its ability to compose as lexical proxy relations with pronouns and binding operators. Following the analysis proposed by Reuland and Winter (2009) for SELF-anaphors (see discussion in section 1.3.2), I will assume that the possessive affix *-že* in *škenže*, like the pronoun *him* in *himself*, denotes a Skolem function: a function from entities to entities that takes a relation as a parameter. This parameter, in our case a reflexive proxy relation PR, determines the range for each possible entity argument (55).

- (55) A function *f* of type (ee) with a relational parameter PR is a *Skolem function* if for every entity *x*: PR(*x*, *f*_{PR}(*x*)) holds. (Reuland 2011: 220)

There is no evidence that in Meadow Mari *ške(n)* can move onto the verb: *ške(n)* does not undergo incorporation into the nominalized verbs. It also doesn’t show effects of the Coordinate Structure Constraint (56).

- (56) President_p Petr-əmə da šken-ž-əmə_{p/*m} ola-ške üž-ən manən
 President Peter-ACC and self-P.3SG-ACC city-ILL invite-PRT that
 Maša_m kuan-en.
 Masha rejoice-PRT
*Masha was happy, that the president invited Peter and himself to Yoshkar-
 Ola.* = (39b)

The possessive marker *-že* is a bound morpheme that attaches either to a postposition or to *šken*. The latter needs the *-n-* – whatever it may contribute – to be a possible host. I argue that *ške* can not move to or syntactically compose with the verb since that would require excorporation (from *-n-* and *-že*), which is forbidden (Baker 1988).

If *ške(n)* does not move onto the verb, it takes the other fork by composing with the Skolem function directly (Reuland 2011). In English, this occurs only in exempt positions, when incorporation with the predicate is syntactically blocked. I however argue that not being able to move onto the verb is a result of the morphological make-up of *škenže*. Direct composition with the Skolem function leads to the following analysis:

- (57) $\textit{škenže} = f_{\textit{šken}}$ = a function mapping every entity x to one of its proxies in $\textit{šken}(x)$

This option, marked for English in the analysis of (Reuland 2011), implies that there is no binding that is made necessary by *self*'s composition. As a result, in English, the exempt reading of *himself* allows it to be interpreted as either bound or free, similarly to the nonreflexive pronoun *him*.

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 (58a) or in number (58b), the derivation is cancelled.

- (58) a. *Məj šken-ž-əm už-am.
 I self-P.3SG-ACC see-PRS.1SG
 Int: I saw himself.
- b. *Pet'a šken-əšt-əm pagal-a.
 Petja self-P.3PL-ACC respect-PRS.3SG
 Int.: Petja respects them(selves).

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 (59).

- (59) John_i showed Mary_j a picture of themselves_{i+j}.

What appears to be important in the case of Meadow Mari is that both parts of the split antecedent belong to the same clause. Moreover, one member of the split antecedent set must be the subject. This is, however, only part of the story. It explains why *škenže* allows split antecedents and need not to be locally bound, but it does not account for its other properties like the subject orientation or restriction on the binding domain.

The account for the behaviour of *škenže* involves the following steps:

1. An operation forming plural individuals from two or more singular ones.

2. The formation of a lambda expression with a variable resulting from the possessive suffix that takes such an individual as its argument.
3. An account of the locality condition on *škenže*.
4. A specific restriction on the valuing of *(šken)že*, such that the formation of the plural individual that values it involves an argument that is a possible antecedent of *(šken)že*. And moreover it should be as local as possible.

I will not offer a specific account of the formation of the plural individuals in the case of split antecedents in Meadow Mari. Instead, I will adopt the approach to split antecedents along the lines of Dimitriadis (2000) (see discussion in section 1.4.2). As interpretation proceeds by phase, we have a hand-in-hand operation of syntactic and interpretation rules. So, a plural individual can be formed at LF (Landman 2000). What is important is that this individual must be assigned a structural position (SpecTP), otherwise it could not be fed into the lambda expression.

Further, *-že* is a pronominal element, that is eventually interpreted by the plural individual. That is, it must be a variable in the lambda predicate that is formed. The formation of lambda expressions is standardly associated with syntactic movement rules. For instance, QR is a (covert) syntactic operation moving a DP from its position; the effect is the formation of a lambda expression (Heim and Kratzer 1998; Reinhart 2006).

The syntactic behaviour of *škenže* suggests a link between the semi-reflexive and a higher functional node. As discussed in section 3.2.2, the possessive suffixes in Meadow Mari can be free, hence the locality restriction does not reside with them. Of the two parts from which *škenže* is built, it seems more likely that it is the *šken*-part which would be responsible for such a link.

As discussed in section 3.2.1, the possessive marker *-že*, if the genitive possessor position (SpecPossP) is not filled, can take any NP present in discourse as its antecedent. Plus, a link between *-že* and a functional head can only ensue as a result of feature deficiency which would lead to chain formation based on feature checking. Such a configuration, however, would provide a straightforward link to SpecTP, which will be uniquely headed and prevent the possibility of split antecedents. On the other hand, if it is *šken* which establishes a link to some higher functional category, it can be expected to limit the choice of possible antecedents for *-že*, without forcing the formation of an A-chain.

Intuitively speaking, a link between *šken* and some functional category in the left periphery of the clause could stem from its bleached semantics. In the case of a standard PossP, *-že* is interpreted as the possessor of the entity denoted by the PossP by virtue of its head noun. In case of *škenže*, no such possession relation is expressed, as is shown by the inability of *škenže* to project a full PossP illustrated in (60). Hence, although *šken* categorically behaves as a noun in a PossP, we may conclude that it lacks the interpretation of an independent argument.

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

Let us then consider the options in more detail. Given (57), there is no obvious deficiency in *šken*. Its contribution to interpretation is already fixed, (57) simply maps *škenže* onto *šken* (x). Also, given *šken*'s relational character, T is not an obvious target. Note, however, that *šken* defines a proxy-relation. There are two aspects to the proxy-function. One is the contextual restriction on the range of values of the second argument (statues, pictures, etc.); the other is a restriction on the domain. This is in fact what elements like *zelf* in Dutch may do in their non-reflexivizing use. In a sentence like (61) the set of alternatives *zelf* introduces is with respect to John, not someone else.

- (61) Jan was ontsteld dat Marie hem zelf had aangeklaagd.
 John was upset that Mary him self had sued
John was upset that Mary had sued him himself. [Dutch]

This is quite compatible with the bleached semantics of *šken*. The Meadow Mari *ške* as an adnominal intensifier can be used in a similar way as the Dutch *zelf*¹⁰. Adnominal intensifiers are used to relate the referent of a given constituent to a set of alternative referents (König and Gast 2006). In (62), the use of *škeže* invokes the set of alternative uses for the name *Kuzhener* (a certain area, a municipal district, a town) and specifies that it is originally the name of the town.

- (62) {LC: *What is beautiful about this place, is that if you cross the ravine, there is a big forest...*}
 Kužener-že ške-že poselok jöršəŋ saj oğəl.
 Kuzhener-P.3SG self-P.3SG town at.all good NEG.PRS.3SG
Kuzhener, the town itself, is not nice at all.

Let us suppose that in Mari such a role of *šken* is grammaticalized. Such relations to context can be encoded in the C-domain (Bianchi 2001; Sigurdsson 2004b, 2011; Delfitto and Fiorin 2011). Given this, it is quite plausible that the contextual restriction on the domain of the proxy-relation introduced by *šken* is in fact encoded in the left periphery. For sake of concreteness I follow Delfitto and Fiorin (2011) who propose that Force encodes the relation between the propositional content of S and the context. I assume that the relevant projection is some Force head F.

¹⁰As discussed in section 3.3.2, the paradigm forms for *škenže* are derived by adding the case and possessive markers to the oblique stem *šken-*. The bare form *ške* can also bear the 3rd possessive singular marker *-že*, but only if the latter is used in non-possessive, emphatic way as in (62) (see Nikolaeva (2003) and footnote 6 for non-possessive functions of possessive affixes in Uralic).

Assuming that infinitival clauses have a deficient F, which depends on the first finite F for its value, it follows by relativized minimality that the first finite F forms an absolute upper boundary. The role of intermediate deficient F's is a matter of timing. If *šken* is contained in a clause with a deficient F, let us assume that the left periphery of that clause contains at least one more functional head. This functional head is equidistant, along the lines of Reuland (2011), and accessible to *šken* (technically, a possible probe). Since F is deficient, economy doesn't care whether or not *šken* links to F, or to the other head. If *šken* links to F, it will end up being valued as soon as F gets valued at a later stage (early closure), and the pronominal whose proxy-function it determines will have to be interpreted in the local domain. If *šken* links to a non-F head, its domain restriction will remain unvalued. Hence, as soon the next higher F is merged as in the course of the derivation, it becomes accessible, etc., until the first finite clause with valued F is merged. In this way, *škenže* as an argument of an embedded infinitival clause gets long-distance bound by the matrix subject.

Thus, when the semi-reflexive is singular, its domain is determined by F, which in turn shares features with T (Chomsky 2008), hence the subject-orientation. In case of the plural form *škenəštəm*, I only have to assume that F restricts its domain to pluralities that are sufficiently salient, in particular those that F bears a relation to, namely pluralities containing the (denotation of the) associated subject, and that the formation of pluralities visible to F is limited to arguments in the local domain of F. Thus I account for the fact that *škenže* cannot take split antecedents that are dominated by different F projections.

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. Suppose then, that participial clauses and nominalizations carry a valued F feature in their left periphery, or with the same result, don't contain the escape hatch. In either case, long-distance binding is not an option. Currently available data don't allow me to choose between these options. So I will have to leave this for further research.

An explanation as to why *škenže* cannot take split antecedents that are separated by a clause boundary can be offered in terms of economy. Example (54) shows that the choice between a local versus (partially) non-local antecedent is relative rather than categorical. The formation of a plural individual involves a costly operation, hence economy requires to minimize further cost and saturate an open position / bind as locally as possible.

In this section I discussed the ability of the pronoun *škenže* to take split antecedents and explored its quirks. I further provided an account why *škenže* licenses reflexivity, but does not enforce it. The next section will discuss the use of *škenže* as an argument of a dative experimenter predicate embedded in a relative clause.

3.5 Dative experiencer predicates

3.5.1 Outline of the problem

The tricky thing about binding of the semi-reflexive *škenže* is its use with the dative experiencer predicates. 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.

Examples in (63)-(64) 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 (63a)-(64a), 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 (63b)-(64b) or have split antecedents (63c)-(64c). In (63c)-(64c), both the pronoun *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.

- (63) a. Ava-ž_{e_i} Jəvan-ə_{m_j} [ška-lan-ž_{e_i/?_j/*_k} kelš-əš_e]
 mother-P.3SG Ivan-ACC self-DAT-P.3PL appeal.to-PTCP.ACT
 üdər_k de-ne pal-ə_m-ə_m əšt-en.
 girl near-INESS know-NZR-ACC do-PRT
The mother introduced Ivan to the girl that appealed to her.
- b. Ača-ž_{e_i} erge-vlak-š-ə_{m_j} [ška-lan-əšt_j
 father-P.3SG son-PL-P.3SG-ACC self-DAT-P.3PL
 kelš-əš_e] üdər de-ne pal-ə_m-ə_m əšt-en.
 appeal.to-PTCP.ACT girl near-INESS know-NZR-ACC do-PRT
The father introduced his sons to the girl that appealed to them.
- c. Ava-ž_{e_i} Jəvan-ə_{m_j} [ška-lan-əšt_{i+j/i+kin/*k}
 mother-P.3SG Ivan-ACC self-DAT-P.3PL
 kelš-əš_e] üdər-vlak_k de-ne pal-ə_m-ə_m əšt-en.
 appeal.to-PTCP.ACT girl-PL near-INESS know-NZR-ACC do-PRT
The mother introduced Ivan to the girl that appealed to them (mother + Ivan / mother + the family).
- (64) a. Jəvan_i ergə-ž-ə_{m_j} üdər_d de-ne pal-ə_m-ə_m əšt-en
 Ivan son-P.3SG-ACC girl near-INESS know-NZR-ACC do-PRT
 [kudo ška-lan-ž_{e_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-ə_{m_j} üdər_k de-ne pal-ə_m-ə_m əšt-en
 Ivan son-P.3SG-ACC girl near-INESS know-NZR-ACC do-PRT

- [kudo ška-lan-əšt_{j/i+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 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
Ivan introduced his son to 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. (65)).

- (65) 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 the agent-theme verb in the participial clause or a finite relative clause, it must be bound locally. In (66a), *škenže* is the argument of the verb *onč'əktəš* 'show' in the embedded participial clause. It is bound by the local subject, the PRO. In the context of agent-theme verb, only the anaphoric pronoun *tudo* can be bound by the matrix subject (66b).

- (66) a. Jəvan_i [∅_j ška-lan-že_{*i/j} ola-m onč'əkt-əšo] jəŋ-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] jəŋ-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 (67), the dative form *škalanže* is an argument of an agent-theme verb *nalaš* 'buy' in the embedded finite relative clause. (67a) 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 (67b).

- (67) a. Jəvan_i Petr-əm_p üdər_u de-ne pal-əm-əm əšten
 Ivan Peter-ACC girl near-INESS introduce0NZR-ACC do-PRT
 [kudo_u ška-lan-že_{u/*p/*i} tengeč'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 introduce0NZR-ACC do-PRT
 [kudo_u tud-lan_{p/i/*u} tengeč'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 (68)-(69), *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.

- (68) Ava-že_i Jəvan-əm_j [Ø_k ška-lan-že ške_{k/*i/*j} kelš-əše]
 mother-P.3SG Ivan-ACC PRO self-DAT-P.3PL self 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 herself.
- (69) Jəvan_i ergə-ž-əm_j üdər_d de-ne pal-əm-əm əšt-en [kudo
 Ivan son-p.3sg-acc girl near-INESS acquaintance-ACC do-PRT which
 ška-lan-že ške_{d/*i} kelš-en].
 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 said in the comments to examples (63)-(64), *škenže* as a dative argument of a dative experiencer predicate in an embedded relative clause modifying indirect object of the matrix clause can never be bound by its coargument. Yet, if the embedded relative clause modifies the subject, it can be.

In (70), *škenže* is an argument of a participial clause (70a) and a finite relative clause (70b), 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.

- (70) a. [Ø_k ška-lan-že_{k/*i} kelš-əše] üdər_k Jəvan_i 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. Üdər_k [kudo_k ška-lan-že_{k/*i} kelš-a] Jəvan-əm_i už-ən.
 girl who self-DAT-P.3SG appeal.to-PRS.3SG Ivan-ACC see-PRT
The girl who liked herself met 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 (71), 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 (70), where *škenže* seemed to be locally bound – cf. (72)¹¹.

¹¹Some speakers do not share the judgements in (71)–(72).

- (71) a. [Ava-že_i Jəvan-əmə_j [ška-lan-že_{i/p/?j} kelš-əše]
 mother-P.3SG Ivan-ACC self-DAT-P.3PL appeal.to-PTCP.ACT
 üdər_k de-ne pal-əm-əm əšt-en maən] 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-že_i Jəvan-əmə_j üdər_k de-ne pal-əm-əm əšt-en
 mother-P.3SG Ivan-ACC girl near-INESS know-NZR-ACC do-PRT
 [kudo ška-lan-že_{p/i/?j} kelš-en] manən] Pötr_p ojl-en.
 which self-DAT-P.3PL appeal.to-PRT that Pjotr say-PRT
Peter said that the mother introduced Ivan to the girl that appealed to her/him.
- (72) a. [[Ška-lan-že_{k/p/*i} kelš-əše] üdər_k Jəvan-əmə_i už-ən
 self-DAT-P.3SG appeal.to-PTCP.ACT girl Ivan-ACC see-PRT
 manən] Petr_p ojl-en.
 that Peter say-PRT
Peter said that the girl who appealed to herself/him saw Ivan.
- b. [Üdər_k [kudo ška-lan-že_{k/p/*i} kelš-a] Jəvan-əmə_i už-ən
 girl who self-DAT-P.3SG appeal.to-PRS.3SG Ivan-ACC see-PRT
 manən] Petr_p ojl-en.
 that Peter say-PRT
Peter said that the girl who liked herself/him saw Ivan.

However, this property of *škenže* does not apply in the similar contexts with agent-theme verbs. In (73), *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 (73a) and (73b), *škenže* must be locally bound.

- (73) a. Jəvan_i Petr-əmə_s teŋgeče ška-lan-že_{k/*i/*v/*p} kniga-m
 Ivan Peter-ACC yesterday self-DAT-P.3SG book-ACC
 nal-əše üdər de-ne pal-əm-əm əšt-en Vas’a
 buy-PTCP.ACT girl near-INESS know-NZR-ACC do-PRT that
 ojl-en.
 Vasja say-PRT
Vasja said that Ivan introduced Peter to a girl who bought herself a book yesterday.
- b. Jəvan_i Petr-əmə_p üdər_k de-ne pal-əm-əm əšt-en kudo
 Ivan Peter-ACC girl near-INESS know-NZR-ACC do-PRT which
 teŋgeče ška-lan-že_{k/*i/*v/*p} kniga-m nal-ən manən Vas’a
 yesterday self-DAT-P.3SG book-ACC buy-PRT that Vasja

ojl-en.
 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.

3.5.2 Discussion

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

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

These verbs mark the experiencer with the dative case, and the theme (stimulus) with the 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 (63), 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 (76), 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 (75a) shows the the nominative argument *Jəvan* can only control the nominative PRO, the dative argument has to be expressed overtly. In a reverse case in (75b) it is only the nominative argument of the dative experiencer predicate that can control the nominative PRO of the conjoint intransitive predicate.

- (75) 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.

- (76) 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. (Sigurdsson 2004a: 142)

Following Belletti and 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 NP-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 nominalization clause.

- (77) 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 (77) shows that *škanže* 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. In general, as discussed in the previous section, binding restrictions on *škenže* are defined by the link between Force in left periphery and *šken* on the one hand and the link between Force and T/SpecTP on the other. Given that SpecTP is not filled, no such link between Force and the low theme argument is created, hence no privileged local binding relation mediated by Force is established. Consequently *škenže* as an argument of a dative experiencer predicate in an embedded relative clause behaves as an exempt (logophoric) pronoun. I leave open at this point whether its relation to a higher subject is mediated by dependencies between the successive higher Force nodes or is directly established by binding in logical syntax.

In this section I discussed the behaviour of the pronoun *škenže* in the context of dative experiencer predicates in embedded relative clauses. It turns out, that in such an environment *škenže* behaves as an exempt pronoun, and can be bound by very distant antecedents. I account for it based on the assumption that T in embedded relative clauses is weaker, and due to the absence of an EPP feature the movement of theme argument is not triggered, hence *škenže* occupies an unusually high position, and no link is instantiated between Force and *škenže*, which otherwise would make sure *škenže* is bound within the finite clause.

3.6 Methodology

Elicitation, as any experimental work, often contains some ‘noise’ results. In general, I had to put aside occasionally contradictory judgements if they were not confirmed by a number of speakers. In controversial cases like the logophoric use of *škenže* with dative experiencer predicates, I followed the majority with two speakers confirming it in several sessions while another one continuously disagreed. At the later stages of working on this chapter another issue has surfaced: the apparent ability of *škenže* to take discourse antecedents. As (78) shows, within a certain context, the semi-reflexive *škenže* apart from being bound, can also have a discourse antecedent.

- (78) Vas’a_v Jəvan-ən_i pij-ž-əm č’umal-e. Vas’a_v
 Vasja Ivan-GEN dog-P.3SG-ACC kick-NARR.3SG Ivan-ACC
 šken-ž-əm_{v/i} vurs-en nal-e.
 self-P.3SG-ACC curse-CONV take-NARR.3SG
Vasja kicked Ivan’s dog. Vasja cursed himself / him.

This, however, contradicts previously accumulated data, for instance, the fact that the pronoun *škenže* must be bound within the finite clause (79), which seemed very well established before I got a judgement in (78) and (80).

- (79) Jəvan_i šken-ž-əm_{i/*m} jorat-a, Maša_m šona.
 Ivan self-P.3SG-ACC like-PRS.3SG Masha think-PRS.3SG
*Masha thinks that Ivan likes himself / *her.*
- (80) Vasja_v Jəvan-ən_i vatə-že_k šken-ž-əm_{k/*i/v} už-ən manən
 Vasja Ivan-GEN wife-P.3SG self-P.3SG-ACC see-PRT that
 šon-a.
 think-PRS.3SG
Vasja thinks that Ivan’s wife saw him / herself.

The structure of (79) and (80) is parallel, yet the speakers provided contradictory judgements. Due to the lack of time I excluded these data and leave

this question for further research. It is known that when the English ‘himself’ is focused and stressed, it can behave as an exempt anaphor even when in an argument position. Perhaps, something like that is happening here.

3.7 Summary

The present chapter discussed the reflexive strategies employed in Meadow Mari: from verbal suffixes *-əlt-* and *-alt-* to complex reflexive *škenžəm ške* to semi-reflexive *škenže*. The latter was of special interest to me, as it exhibits rather peculiar behaviour for a reflexive, allowing split antecedents and violating binding constraints in the context of dative experiencer predicates. As for the complex reflexive *škenžəm ške*, these peculiarities do not pertain to it. In section 3.4 I discussed various configurations of split antecedents and came to the conclusion that the only possibility is if *škenže* and the split antecedents are all arguments of the same predicate. I further provided an account for the ability of *škenže* to license but not enforce reflexivity. In section 3.5 I discussed the use of *škenže* with dative experiencer verbs, and my account of its nature.

CHAPTER 4

Komi-Zyrian

4.1 Language profile

Komi-Zyrian [kpv] is a Uralic language of the Permic subgroup (together with Komi-Permyak and Udmurt). According to the 2010 census, 156,000 people listed Komi-Zyrian as their native language with the ethnic population exceeding 228,000. The speakers mostly live in the Komi Republic in the north-east of the European part of Russia and in the Nenets, Yamalo-Nenets and Khanty-Mansi autonomous regions in the north-west of Siberia.

This chapter presents a description and analysis of reflexivity in two dialects of Komi-Zyrian: the Pechora and Izhma dialects. The Pechora dialect is spoken in Yeremeevo, in the south-east of the Komi Republic, an isolated village on the shores of the river Ilych at the border of the Pechora-Ilych Nature Reserve. In summer it is reachable only by boat. The data on the Pechora dialect were obtained during a number of fieldtrips to the Yeremeevo village in 2002-2003, organized by the Moscow State University, partly by myself and partly through questionnaires¹.

The Izhma dialect of Komi-Zyrian was originally spoken along the river Izhma. In the second quarter of the nineteenth century Izhma Komi speakers started migrating behind the Ural mountains to the region along the river Ob', first seasonally as part of deer herding, and by 1840 on a permanent basis. One of the settling centres was the village of Muzhi (Yamalo-Nenets Autonomous

¹I would like to thank Aleksandra Sudobina and Natalia Serdobolskaya for their selfless help with the questionnaires.

Okrug) (see Kuznetsova (2012b)). The data was compiled during a fieldtrip to Muzhi in the summer of 2009.

The basic word order in Komi-Zyrian is SOV. In the nominal domain the language is characterized by using two genitive cases (*l̄as'* / *-lys'* 'GEN2' is used for the possessor argument of a direct object, *-l̄ən* / *-len* 'GEN1' for possessors in all other positions), postpositions and the absence of grammatical gender. In the verbal domain the verb obligatorily agrees with the subject in person and number and distinguishes four tenses: future and present (distinct only in 3rd person), past and perfect.

4.2 Reflexive strategies

The most economical and conceptually easy way to express that the arguments of a predicate are covalued would be the use of a bound pronoun (see discussion in section 1.3). However, in Komi-Zyrian, just like in many other languages, “brute force” reflexivization of this type is prohibited.

- (1) *Pet'a_i sij-əs_i vidč'-ə.
 Peter that-ACC scold-PRS.3
 Int.: Peter scolds at himself. [Pechora]
- (2) *Me mene mys'k-a.
 I I.ACC wash-NPST
 Int.: I wash myself. [Izhma]

As discussed in section 1.3, I assume that the prohibition of local binding of pronominal elements is rooted in the properties of the computational system of human language. The C_{HL} cannot distinguish between two occurrences of the same linguistic object in a local domain (IDI). To avoid brute force reflexivization languages employ various strategies which can be grouped in two clusters:

- (i) strategies involving valence reduction of the predicate and enabling the two roles to be assigned to the one remaining argument – bundling; and
- (ii) strategies making the two arguments formally distinct, but allowing (a suitable approximation of) a reflexive interpretation – protection.

Komi-Zyrian employs both types of strategies. The verbal one (i) is represented by the detransitivizing suffixes *-č'* and *-ys'* and the nominal one (ii) includes a semi-reflexive *ač'ys* and a bare form *as*, as well as a complex reflexive *ač'ys as'se* in the Izhma dialect. A demonstrative pronoun *sy* ‘that, the other’ is used as a 3rd person pronominal.

4.3 Valence reduction

The Theta System (Reinhart (2002), Reinhart and Siloni (2005)) presents a general theory of operations on argument structure, one of which is bundling of θ -roles (see discussion in section 1.3.2). The bundling operation reduces the internal argument of a two-place predicate and combines the internal role (theme) and the external role (agent) into a composite agent-theme role.

Komi-Zyrian uses detransitivizing suffixes *-č'* in the Pechora dialect and *-č'* and *-ys'* in the Izhma dialect to license reflexivity. The distribution of the suffixes in Izhma Komi-Zyrian is phonologically determined (Idrisov 2009).

Example (3a) illustrates the use of a transitive verb *džagødny* ‘strangle’ in Pechora dialect. The detransitivizing suffix *-č'* (3b) reduces the internal argument of the verb, the verb *džagødčyny* ‘hang oneself’ behaves as syntactically intransitive, in the sense that no internal argument is projected.

- (3) a. Kan' džagød-i-s čipan-pi-əs.
 cat strangle-PRT-3 han-son-ACC
The cat strangled the chicken. (Beznosikova et al. 2000)
- b. Me kysj-a džagød-č'-yny.
 I want-NPST strange-DETR-INF
I want to hang myself. [Pechora] (Sudobina 2002)

In (4a) the use of a transitive verb *os'kyny* ‘praise’ is shown. When the detransitivizing suffix *-ys'* is added, the resulting verb *os'jys'yny* ‘praise oneself’ is syntactically intransitive, the internal argument is reduced.

- (4) a. Detina-jas as'-ny-s-se os'k-i-s-ny-s.
 guy-PL self-PL-3-ACC.3 praise-PRT-3-PL-3
The guys praised themselves. [Izhma]
- b. Detina-jas os'j-ys'-i-s-ny-s.
 guy-PL praise-DETR-PRT-3-PL-3
The guys boasted / praised themselves. [Izhma]

Example (5a) shows the use of a transitive verb *br'it'itny* ‘shave’. In (5b) the detransitivizing suffix *-č'* is added, reducing the internal argument of the verb and creating a syntactically intransitive verb *br'it'itčyny* ‘shave oneself’.

- (5) a. Pet'a Van'a-es br'it'it-i-s.
 Petja Vanja-ACC shave-PRT-3
Peter shaved Vanja. [Izhma]
- b. Pet'a br'it'it-č'-ema.
 Petja shave-DETR-PF
Peter shaved. [Izhma]

4.4.1 Morphological remarks

The pronoun *ač'ys* consists of a root and a possessive suffix agreeing in person and number features with its antecedent. It also inflects for case. The possessive markers and case markers are attached to the root *ač'-/as'-/as-*. The paradigm of *ač'ys* in the Pechora dialect is much longer than in the Izhma dialect due to the presense of locative case forms in the former (tables 4.1 and 4.2). In Izhma, most of the non-core cases are replaced with postpositional phrases with *as*.

There are a number of morphophonological differences between the Pechora and Izhma dialects. Most notably, the 1st person possessive suffix in Pechora is *-(y)m*, while in Izhma it is *-um*. Due to phonological accomodation, the Dative marker *-ly-* in Izhma in first person plural form is changed into *-lu-*: *aslynym* in Pechora vs. *aslunum* in Izhma. In Pechora all the nominative forms are derived from the root *ač-*, in Izhma only the singular forms are derived from *ač-*, while in plural the root *as'-* is used. The situation is reversed in the first person singular Accusative form: *ačumes* in Izhma and *as'yməs* in Pechora. Further, the Izhma dialect differs from Pechora in the Accusative: in Izhma the vowel in the Accusative markers is *e*: *-es* /ACC.1/, *-te* /ACC.2/, *-se* /ACC.3/; in Pechora it is *ə*: *əs* /ACC.1/, *-tə* /ACC.2/, *-sə* /ACC.3/. In Genitive2 in Pechora the root *as-* is fused with the case marker *-s'-* also used with personal pronouns, for instance, *m'en-s'-ym* /I-GEN2-P.1SG/ (Prozorova 2002). In Izhma the Genitive2 marker is distinct from the root *as'-*.

4.4.2 Binding properties

The relation between *ač'ys* and its antecedent can be an instance of binding and not coreference. This is shown by example (8) where *ač'ys* has a non-referential antecedent *n'ekod* 'no one'.

- (8) N'e-kod as'-sə o-z myždy.
 NEG-who self-ACC.3 NEG.NPST-3 blame
Nobody blamed himself. [Izhma]

Komi-Zyrian *ač'ys* requires a c-commanding antecedent (9),(10a). The pronominal should be free in the local domain (10b).

- (9) P'et'a-lən_i č'oj-əs_j radejt-ə as'-sə_j.
 Peter-GEN1 sister-3 love-PRS.3 self-ACC.3
Peter's sister loves herself. [Pechora]
- (10) a. Van'a-lyn_i aj-is_j as'-s'e_j/*_i os'k-i-s.
 Vanja-GEN1 father-3 self-ACC.3 praise-PRT-3
Vanja's father praised himself. [Izhma]
- b. Van'a-lyn_i aj-is_j sije_i/*_j os'k-i-s.
 Vanja-GEN1 father-3 he.ACC praise-PRT-3
Vanja's father praised him. [Izhma]

4.4. Protection: the pronoun ač'ys

Case	Person & Number					
	1SG	2SG	3SG	1PL	2PL	3PL
NOM	ač'-ym	ač'-yɗ	ač'-ys	ač'-ny-m	ač'-ny-d	ač'-ny-s
GEN1	as-la-m	as-la-d	as-la-s	as-la-ny-m	as-la-ny-d	as-la-ny-s(-lym)
GEN2	as ⁱ -ym	as ⁱ -yɗ	as ⁱ -ys	as ⁱ -ymy-m(-las ⁱ)	as ⁱ -ymy-d(-las ⁱ)	as ⁱ -ymy-s
DAT	as-ly-m	as-ly-d	as-ly-s	as-ly-ny-m(-ly)	as-ly-ny-d(-ly)	as-ly-ny-s(-ly)
ACC	as ⁱ -ym-as	as ⁱ -ta	as ⁱ -sa	as ⁱ -ny-m-as	as ⁱ -ny-d(-ə)	as ⁱ -ny-s-sə
INSTR	as-na-m(-ən) as-s ⁱ -m-ən	as-na-d	as-na-s	as-na-ny-m	as-na-ny-d	as-na-ny-s
COMIT	as-kəd-ym	as-kəd-yɗ	as-kəd-ys	as-kəd-ny-m	as-kəd-ny-d	as-kəd-ny-s
				as-ny-d-kəd		as-ny-s-kəd
CONSEC	as-la as-la-m-la	as-la(-yɗ) as-la-d-la	as-la(-ys) as-la-s-la	as-la-ny-m-la	as-la-ny-d-la	as-la-ny-s-la
CAR	as-təd-ym	as-təd-yɗ	as-təd-ys	as-təd-ny-m	as-təd-ny-d	as-təd-ny-s
INESS/ILL	as-a-m	as-a-d	as-a-s	as-a-ny-m	as-a-ny-d	as-a-ny-s
APPROX	as-lan ⁱ -ym	as-lan ⁱ -yɗ	as-lan ⁱ -ys	as-lan ⁱ -ny-m	as-lan ⁱ -ny-d	as-lan ⁱ -ny-s
PROL1	as-ti	as-ti-yɗ	as-ti-ys	as-ti-ny-m	as-ti-ny-d	as-ti-ny-s
TERM	as-əʒ ⁱ	as-əʒ ⁱ	as-əʒ ⁱ -ys	as-ny-m-əʒ ⁱ	as-ny-d-əʒ ⁱ	as-ny-s-əʒ ⁱ
EGR	as-s ⁱ 'an ⁱ (-ym)	as-s ⁱ 'an ⁱ (-yɗ)	as-s ⁱ 'an ⁱ (-ys)	as-s ⁱ 'an ⁱ (-ny-m)	as-s ⁱ 'an ⁱ (-ny-d)	as-s ⁱ 'an ⁱ (-ny-s)

Table 4.1: The paradigm for ač'ys (Pechora) (Prozorova 2002)

Case	Person & Number					
	1SG	2SG	3SG	1PL	2PL	3PL
NOM	ač'-um	ač'-yd	ač'-ys	as'-n-um	as'-ny-d	as'-ny-s
GEN1	as-la-m	as-la-d	as-la-s	as-la-n-um	as-la-ny-d	as-la-ny-s
GEN2	as'-s'-um	as'-s'-yd	as'-s'-ys	as'-s'u-ny-m	as'-s'y-ny-d	as'-s'y-ny-s
DAT	as-l-um	as-ly-d	as-ly-s	as-lu-n-um	as-ly-ny-d	as-ly-ny-s
ACC	ač'-um-es	as'-te	as'-se	as'-n-um-es	as'-ny-d-te	as'-ny-s-se
INSTR	as-na-m	as-na-d	as-na-s	as-na-n-um	as-na-ny-d	as-na-ny-s

Table 4.2: The paradigm for *ač'ys* (Izhma) (Shmatova 2008)

It appears, judging by the data, that the antecedent for *ač'ys* must not only c-command it, but also be a subject of the clause (11). Example (11a) shows that *ač'ys* cannot have an object as an antecedent, instead a personal pronoun is used in this case (11b).

- (11) a. Maša_m kor'-i-s P'et'a-s_p as_m/*_p dor-as.
Masha call-PRT-3 Petja-ACC self edge-P.ESS/ILL-P.3
Masha called Petja to herself. [Izhma]
- b. Me vis'tal-y tijan ti pomlas'-ne-d.
I tell-PRT you.PL.DAT you.PL about-PL-P.2
I told you about yourselves. [Izhma]

The Pechora dialect

In the Pechora dialect the pronoun *ač'ys* is used to license reflexivity in the coargument position in case of both subject experiencer verbs (9) and agent-theme verbs (12) alike. Examples (12)-(13) show that being covalued with the subject of the clause, *ač'ys* can occupy the direct and indirect object positions and, unlike its counterpart in Meadow Mari, it can also be used in non-coargument positions (14).

- (12) Pet'a as'-sə vidč'-ə.
Peter self-ACC.3 scold-PRS.3
Peter scolds at himself. [Pechora]
- (13) Van'a n'əb-i-s as-ly-s n'an'.
Ivan buy-PRT-3 self-DAT-3 bread
Ivan bought bread for himself. [Pechora]
- (14) Sija puks'id-i-s kaga-sə as-kəd-ys ortč'an.
he seat-PRT-3 child-ACC.3 self-COMIT-3 near
He seated the child next to himself. [Pechora]

The pronoun *ač'ys* must be bound within the local finite clause.

- (15) Ivan_i esk-ə [myj Pet'a_j as'-sə*_{i/j} / sij-əs_i pyd'd'i pukt-ə].
 Ivan believe-PRS.3 that Peter self-ACC.3 / that-ACC respect-PRS.3
Ivan believes that Petja respects himself / him. [Pechora]

It can be used as a long-distance anaphor in infinitival clauses. Examples (16)–(17) show the use of *ač'ys* as a long-distance anaphor in the embedded infinitival clauses: in (16), *ač'ys* occupies the position of the indirect object of the embedded predicate, and in (17) the direct object position. Example (18) illustrates the use of *ač'ys* in the infinitival construction with a complementizer. In all three examples, *ač'ys* can be covalued with both the matrix subject and the subject of the embedded clause.

- (16) Kat'a_i s'i-i-s mam-ys-ly_j [Ø_j vur-ny as-ly-s_{i/j} plat'je].
 Katja tell-PRT-3 mother-3-DAT PRO sew-INF self-DAT-3 dress
Katja told her mother to sew her(self) a dress. [Pechora]
- (17) Vok-ys_i s'u-i-s č'o_j-ys-ly_j [Ø_j sad'məd-ny as'-sə_i vo_c'
 brother-3 say-PRT-3 sister-3-DAT PRO wake.up-INF self-ACC.3 early
 asylnas]. [Pechora]
 morning
The brother told his sister to wake him up early in the morning.
- (18) Bat'a_i s'et-i-s den'ga pij-əs-ly_j [meddym Ø_j leč'it-ny as'-sə_{i/j}].
 father give-PRT-3 money son-3-DAT COMPL PRO treat-INF self-ACC.3
The father gave his son money for his (own medical) treatment.
 [Pechora]

In the participial clauses formed with *-is'* in Pechora Komi-Zyrian the pronoun *ač'ys* must be bound locally.

- (19) Pet'a_i gətras'-i-s [Ø_j as'-sə*_{i/j} / sij-əs_i rad'ejt-is'] nyl_j
 Peter marry-PRT-3 PRO self-ACC.3 / that-ACC love-PTCP.ACT girl
 vyl-yn.
 up-INESS
Peter married a girl who loves him. [Pechora]

However, if the participle in the embedded clause is formed with *-əm-*, *ač'ys* can be bound by the matrix subject.

- (20) P'et'a_i tədməd-i-s Vas'a-əs_j [as-ly-s_i mignit-əm] nyl-kəd.
 Peter introduce-PRT-3 Vasja-ACC self-DAT-3 wink-NZR girl-COMIT
Peter introduced Vasja to a girl, who winked at him(self). [Pechora]

There are two important differences between participles formed with *-is'* and with *-əm-*: a participle with *-is'* relativizes only the subject position and expresses an action simultaneous with the tense of the main clause, or with the present tense if there are no other tense markers. In contrast a participle with *-əm-* can relativize various positions (subject, direct object, localization, DO possessor) and expresses an action in the past, perfectivity (for the analysis see section 4.7.2).

In this subsection we discussed the binding properties of *ač'ys* in the Pechora dialect: *ač'ys* cannot be bound across a finite clause boundary, it can take both argument and non-argument positions in the simple clause. It can be long-distance bound by the matrix subject if it is an argument of an embedded infinitival clause and a participial clause formed with a *-əm-*participle.

The Izhma dialect

In the Izhma dialect *ač'ys* must be bound within the local finite clause as well. Example (21) shows that if *ač'ys* is an argument of a embedded finite predicate, it must be bound locally.

- (21) Ivan_i dumajt-e što Maša_m as'-se_{m/*i} l'ubit-e.
 Ivan think-PRS.3 that Masha self-ACC.3 love-PRS.3
Ivan thinks that Masha loves herself. [Izhma]

In a simple clause *ač'ys* can occupy both argument (21) and non-coargument positions (22).

- (22) As'-s'-ys oddor Ivan-lyn n'ikod abu.
 self-GEN2-3 except Ivan-GEN1 no.one NEG
Ivan doesn't have anyone except himself. (lit. No one is to Ivan except himself) [Izhma]

If *ač'ys* serves as an argument of an embedded infinitival clause, it can be bound both by the local and by the matrix subjects (23).

- (23) Maša_i kor-i-s mužik-se_j n'əb-ny as-ly-s_{i/j} mašina.
 Masha ask-PRT-3 husband-ACC.3 buy-INF self-DAT-3 car
Masha asked her husband to buy a car for her/himself. [Izhma]

The data from the Izhma dialect suggest that in the embedded participial clauses where a participle is formed with *-is'* it is possible for *ač'ys* to be bound across the clause boundary. This contrasts with the properties of *ač'ys* in Pechora which cannot have a long-distance antecedent if it is an argument of an embedded participle formed with *-is'*.

- (24) Ivan_i mun-i-s mortys_j dor-e [as-ly-s_{i/j} kerka kars'-is']-ly.
 Ivan go-PRT-3 man to-ILL self-DAT-3 house build-PRTCP.ACT-DAT
Ivan went to the man building him / himself a house. [Izhma]

As a subject of a nominalized clause, *ač'ys* can be bound by the subject of the matrix clause.

- (25) Pet'a_p pəmmit-e as'-s'-is_p Van'a-əs nəjt-em-se.
 Petja remember-PRS.3 self-GEN2-3 Vanja-ACC beat-NZR-ACC.3
Petja remembers, how he himself beat Vanja. [Izhma]

That might be accounted for if we assume that the subject of the nominalization clause in a number of Finno-Ugric languages undergoes raising to the matrix clause and occupies the position of a genitive possessor (see the analysis in Serdobolskaya (2008)).

Speakers differ in their interpretation of *ač'ys* as an internal argument of a nominalized clause, but the prevailing view seems to be that *ač'ys* can be bound across a nominalized clause boundary³.

- (26) Pet'a_p ad'd'il-i-s Kat'a-lys'_k ləs'ad-eme vos'adem as-ly-s_{k/p}.
 Petja see-PRT-3 Katja-GEN2 prepare-NZR present self-DAT-3
Petja saw a present made for herself / him by Katja. [Izhma]

To sum it up, in the Izhma dialect *ač'ys* must be bound within a finite clause. In a simple clause it can occupy coargument and non-coargument positions. The pronoun *ač'ys* can take long-distance antecedents as an argument of infinitival, participial and nominalized embedded clauses. In that respect it differs from *ač'ys* in Pechora which must be locally bound as an internal argument of a nominalization.

4.5 The bare form *as* and its uses

In Komi-Zyrian the bare form *as* comes in two flavours: it can function as a complement of a postposition (both in Izhma and in Pechora) and in certain contexts as a possessive reflexive (only in Izhma). As a complement of a postposition *as* is used in the non-coargument positions (27)–(28).

- (27) Me_i kut-i gorzy-ny i kor-ny pədruga-əs as_i dor-ə.
 I start-PRT shout-INF and call-INF friend-ACC.1 self edge-ILL
I started shouting and calling my friend to me. [Pechora]
- (28) Maša_i ad'd'-i-s kniga-se as_i dor-a-s.
 Masha see-PRT-3 book-ACC.3 self edge-INESS/ILL-3
Masha saw a book next to herself. [Izhma]

³The direct object of the nominalized clause in Izhma Komi-Zyrian cannot be coded by accusative (it should be nominative instead): Subj-GEN DO-NOM V-NZR. However, many speakers at one time or another ignore this fact – cf. (25) which creates a lot of noise in cross-speaker judgement elicitation.

In the context of some locative postpositions if they carry a possessive affix, *as* can be omitted (29)-(30).

- (29) D'ed-ə bos't-i-s eššə (as) s'ərs'-ys ružje.
 grandfather-1SG take-PRT-3 further self with-3 rifle.
Besides, the grandfather took a rifle with him. [Pechora]
- (30) Sya ad'd'-i-s (as) vylys-a-s nom.
 he see-PRT-3 self on-INESS/ILL-3 mosquito
He saw a mosquito on himself. [Izhma]

If *as* is used in a postpositional phrase, it requires a possessive suffix on the postposition:

- (31) As meste-a-s sya yst-ema pij-se / *As meste-e ...
 self place-INESS/ILL-3 he send-PF son-ACC.3 / self place-ILL
He sent his son instead of himself. [Izhma]

In Pechora Komi-Zyrian, the bare form *as* cannot be used as a possessive reflexive. This function is fulfilled by the Genitive1 and Genitive2 forms of the pronoun *ač'ys*. In contrast, in the Izhma dialect *as* can be employed as a possessive reflexive if the head noun is not a direct object of a predicate – in which case the Genitive2 form of *ač'ys* should be used (32). The bare form *as* in the Izhma dialect is interchangeable with the Genitive1 form *aslas* (33).

- (32) Ivan voč'-i-s as'-s'-is mašina-se / *as mašina-se.
 Ivan repair-PRT-3 self-GEN2-3 car-ACC.3 / self car-ACC.3
Ivan fixed his car. [Izhma]
- (33) Sy-ly as-la-s / as baba-ys ləs'al-e.
 he-DAT self-GEN1-3 / self wife-3 appeal.to-PRS.3
His wife appeals to him. [Izhma]

Although *as* as a possessive reflexive cannot be an argument of the direct object, it can express the possessor of the direct object possessor:

- (34) Ivan jualt-i-s as velydys'-ys-lyš' sovet.
 Ivan ask-PRT-3 self teacher-P.3-GEN2 advice
Ivan asked an advice from his teacher. [Izhma]

If the bare form *as* is used in a nominalized embedded clause in the Pechora dialect, it must be locally bound.

- (35) Sy-ly_i kažitč'-ə Pet'a-lən_j viš'tal-əm as_{*i/j} / sy_i jyl-š'y-s.
 that-DAT appeal.to-PRS.3 Peter-GEN1 talk-NZR self / that about-EL-3
It appeals to him that Peter is talking about himself. [Pechora]

The same holds true for converbs. In (36), *as* is a complement of a postposition in the embedded converb clause and it must be locally bound by its subject *Kolja*.

- (36) Pet'a-ly_p vəl-ə zev janž'im Koly-lən_k Maša-ly_m as_{k/*p}
 Peter-DAT be-PRS.3 very shameful Kolja-GEN1 Masha-DAT self
 jil-yš vis'tal-ig-ən.
 about-EL tell-CONV-INSTR
Peter was very embarrassed when Kolja talked to Masha about himself.
 [Pechora]

In the Izhma dialect the bare form *as* can be bound across the nominalization boundary:

- (37) Vas'a_i kuz-i-s aj-ys-lyš'_j lyd'd'iš'-em-se as_{i/j} pomlaš'-ys.
 Vasja listen?-PRT-3 father-3-GEN2 read-NZR-ACC.3 self about-3
Vasja listens to his father reading about him/himself. [Izhma]

To sum it up, in the Pechora dialect the bare form *as* can be used in postpositional phrases, but not as a possessive reflexive, and it must be locally bound (at least, in the nominalized and converb clauses). In the Izhma dialect *as* can be used both as a postpositional complement and as a possessive reflexive. It is also allowed to have long-distance antecedents across the nominalized clause boundary.

4.6 The Izhma complex reflexive *ač'ys as'se*

4.6.1 The syntactic status

Apart from a simpler reflexive *ač'ys*, the Izhma dialect also employs a complex reflexive *ač'ys as'se*. It is worth noting that in both dialects *ač'ys* can be used as an intensifier. As an adnominal intensifier it can be both preposed and postposed with respect to the modified NP. In that respect it is a fair question to ask whether *ač'ys as'se* is a constituent or an accidental sequence of an intensifier adjacent to a reflexive. In many regards *ač'ys as'se* behaves as a constituent: it can be topicalized as a whole (38b) and serves as an answer to a question (38c).

- (38) a. Sya l'okes kar'-i-s ač'-ys as-ly-s.
 he bad do-PRT-3 self-P.3 self-DAT-P.3
He harmed (did bad to) himself. [Izhma]
- b. Ač'-ys as-ly-s sya l'okes kar'-i-s.
 self-P.3 self-DAT-P.3 bad do-PRT-3
He harmed (did bad to) himself. [Izhma]

- c. –Kod l’okes kar’-i-s? –Ač’-ys as-ly-s.
 Who bad do-PRT-3 self-P.3 self-DAT-P.3
To whom did he do bad? – To himself. [Izhma]

Example (39) shows that an adverb *zej* ‘very (much)’, which modifies the VP, cannot be inserted between the parts of a complex reflexive *ač’ys as’sē*.

- (39) *Sya žalejt-e ač’-is zej as’-se.
 s/he pity-PRS.3 self-3 very self-ACC.3
 Int.: She pities herself very much. [Izhma]

If the parts of *ač’ys as’sē* switch places, according to the speakers, the meaning of the sentence (40a)–(40b) does not change. However, if *ač’ys* is separated from *as’sē* by both a subject and a verb, as in (40c), that changes the meaning of the sentence.

- (40) a. Aje pin’al-e ač’-is as’-se.
 father scold-PRS.3 self-3 self-ACC.3
The father scolds at himself. [Izhma]
 b. Aje pin’al-e as’-se ač’-is.
 father scold-PRS.3 self-ACC.3 self-3
The father scolds at himself. [Izhma]
 c. Ač’-ys aje pin’al-e as’-se.
 self-3 father scold-PRS.3 self-ACC.3
The father himself scolds at himself. [Izhma]

To sum up, *ač’ys as’sē* is a constituent, but the relative order of its parts is less rigid than, for example, that of its Meadow Mari counterpart *škenžom ške* (see section 3.3.2).

4.6.2 Syntactic properties

Example (41) with the non-referential antecedent shows that the relation between the complex reflexive *ač’ys as’sē* and its antecedent can be binding and not coreference.

- (41) N’e-kod ač’-ys as’-sə o-z myždy.
 NEG-who self-P.3 self-ACC.3 NEG.NPST-3 blame
Nobody blamed himself. [Izhma]

The complex reflexive *ač’ys as’sē* can be used in a direct (40a) and indirect (42) object positions.

- (42) Van’a n’əb-i-s (ač’-ys) al-ly-s kniga.
 Vanja buy-PRT-3 self-3 self-DAT-3 book
Vanja bought himself a book. [Izhma]

The complex reflexive *ač'ys as'se* must be locally bound. In (43) *ač'ys as'se* is an argument of an embedded infinitival clause, it cannot be bound by the matrix subject, it must be bound by the most local antecedent, in this case a PRO controlled by the direct object of the main clause *mužikse* ‘husband’.

- (43) Maša_m kor-i-s mužik-se_j [∅ n'əb-ny ač'-ys as-ly-s*_{m/j} mal'č'a].
 Masha ask-PST-3 husband-ACC.3 PRO buy-ACC self-3 self-DAT-3 fur.coat
Masha asked her husband to buy a malitsa for himself. [Izhma]

How does the Izhma Komi-Zyrian complex reflexive *ač'ys as'se* license reflexivity? It consists of two forms, the first one – *ač'ys* – copies the case of the antecedent (subject), while the second gets the case of the argument. The case of the first element needs to get licensed. The nearest licenser is the T-node, the feature sharing creates a dependency with the subject and enforces locality of the antecedent (cf. a similar pattern in Besermyan Udmurt in chapter 5). I expect that similarly to its Meadow Mari and Besermyan Udmurt counterparts, the complex reflexive *ač'ys as'se* does not allow split antecedents.

To conclude, unlike the Pechora dialect which uses only the semi-reflexive *ač'ys* to license reflexivity, the Izhma dialect also employs a complex reflexive *ač'ys as'se*. Similarly to its counterpart in Meadow Mari, the complex reflexive *ač'ys as'se* must be bound in the coargument domain.

4.7 Split antecedents

4.7.1 Outline of the puzzle

The Komi-Zyrian *ač'ys* allows split antecedents. In (44)–(45), the pronoun *ač'ys* bears a plural marker *-ny-* which signals that it requires a plural antecedent, while both other arguments of the verb are singular. The form *as'-ny-s-sə/as'-ny-s-se* /self-PL-P.3-ACC.3/ is interpreted as having split antecedents.

- (44) Pet'a_i petkədl-i-s Vany-ly_j as'-ny-s-sə_{i+j} fotokartoč'ka vyl-ys'.
 Peter show-PRT-3 Ivan-DAT self-PL-P.3-ACC.3 photo up-EL
Peter showed Ivan themselves on the photo. [Pechora]
- (45) Mam-ys_m p'etkydl-i-s č'el'ad-is-ly_c as'-ny-s-se_{m+c} fotokartočka
 Mother-P.3 show-PRT-3 child-P.3-DAT self-PL-P.3-P.3.ACC photo
 vyly.
 on
The mother showed to the child themselves on a photo. [Izhma]

Izhma Komi-Zyrian also allows split antecedents across an embedded clause boundary. In (46) *ač'ys* is an argument of the embedded infinitival clause and takes as an antecedent a combination of local PRO and the matrix subject which are separated by the infinitival clause boundary.

- (46) Maša_i č'əkt-i-s mužik-ys-ly_j [∅_j n'əb-ny as-ly-ny-s_{i+j} mašina-se].
 Masha say-PRT-3 husband-3-DAT PRO buy-INF self-DAT-PL-3 car-ACC.3
Masha said to her husband to buy a car for themselves. [Izhma]

Example (47) shows *ač'ys* in the position of an argument of a predicate in an embedded finite clause bearing the plural marker *-ny-*, while both the local subject *Maša* and the matrix subject *Pet'a* are singular. The pronoun *aslymys* is interpreted as having split antecedents separated by a finite clause boundary, which is surprising given that normally *ač'ys* must be bound within the first finite clause⁴.

- (47) Pet'a_p vis'tal-i-s što Maša_m as-ly-ny-s_{m+p} pyžal-əma kul'ebaka.
 Petja say-PRT-3 that Masha self-DAT-PL-3 bake-PF kulebyaka
Petja said that Masha baked a pie for themselves. [Izhma]

4.7.2 Discussion

By now it is quite obvious that the behaviour of *ač'ys* in the two dialects of Komi-Zyrian differs considerably. To summarize, in the Pechora dialect *ač'ys* behaves in most respects as its counterpart *škenže* in Meadow Mari. The only difference is that it allows long distance antecedents with the participles formed with *-əm-*.

The Izhma dialect employs both *ač'ys* and a complex reflexive *ač'ys as'se*. The pronoun *ač'ys* in Izhma Komi-Zyrian behaves quite differently from Pechora *ač'ys*: it allows long distance binding not only into the infinitival clauses but also into the participial clauses (with both *-is'* and *-əm-* participles) and nominalizations. The bare form *as* can also be long-distance bound in nominalizations (unlike in Pechora). In both dialects *ač'ys* allows split antecedents, but in Izhma they can be separated by a (non-)finite clause boundary.

It is logical to assume that the differences in syntactic properties of *ač'ys* in the two dialects of Komi-Zyrian stem from the way the semi-reflexive participles in licensing reflexivity.

Ač'ys in Pechora Komi-Zyrian

For *ač'ys* in Pechora I propose that the mechanism of establishing a dependency is essentially the same as in Meadow Mari (see section 3.4.2). The possessive suffix that agrees with the antecedent in ϕ -features instantiates a variable. The *ač'-/as-/as'*-part is a relational noun and it serves as a Morph protecting the variable, and thus keeping two variable tokens distinct. I propose that the possessive affix in *ač'ys* denotes a Skolem function: a function from entities to entities that takes a relation as a parameter (see the full analysis in Reuland and Winter (2009), also summarized in section 1.3.2). This parameter, in our

⁴Unfortunately, I do not have the corresponding data for the Pechora dialect.

case a reflexive proxy relation, determines the range for each possible entity argument.

The *ačʹ-/as-/asʹ-* part cannot covertly move onto the verb the way *self* does in case of the English *himself*, as that would require excorporation from the possessive suffix (Baker 1988). Hence, *ačʹys* in Pechora Komi-Zyrian composes with the Skolem function directly (Reuland and Winter 2009) which means that it is the possessive marker that defines the interpretation of *ačʹys*.

$$(48) \quad ačʹys = f_{ačʹ} = \text{a function mapping every entity } x \text{ to one of its proxies in } ačʹ(x)$$

I assume that possessive markers behave in Komi-Zyrian the same way they do in Meadow Mari (section 3.2.2) meaning that they are interpreted as pronominals. In combination, the type of establishing a dependency and the properties of possessive suffixes account for the ability of *ačʹys* in Pechora to allow split antecedents.

However, these factors do not predict any syntactic constraints on the behaviour of *ačʹys*. Yet, we know that the semi-reflexive in Pechora needs to be bound within a finite clause and preferably by the subject. This type of behaviour suggests a link between the semi-reflexive and a higher functional node. This link is, however, not of an A-chain type as that would exclude any possibility for taking split antecedents. Similarly to Meadow Mari, such a link could stem from the bleached semantic of *ačʹ-/as-/asʹ-*, the deficiency of the possession relation or the inability of *ačʹys* to project a full PossP.

As discussed in section 3.4.2, one of the non-reflexive functions of Meadow Mari *škenže* and its counterparts is the ability to invoke the set of alternatives to the modified argument. For example, in (49) the president is contrasted with all other possible officials who could have come to the village.

$$(49) \quad \begin{array}{l} \text{Ötčəd mijan} \quad \text{s'ikt-ə} \quad \text{vol-i-s} \quad \text{ačʹ-ys} \quad \text{prezident-əs.} \\ \text{once} \quad \text{we.GEN1} \quad \text{village-ILL} \quad \text{come-PRT-3} \quad \text{self-P.3} \quad \text{president-P.3} \\ \text{Once the president himself came to our village.} \end{array} \quad [\text{Pechora}]$$

I propose that this ability of *ačʹys* can be encoded syntactically in the C-domain (Bianchi 2001; Delfitto and Fiorin 2011), for instance, by some Force head F. The first finite F forms an absolute upper boundary capping binding options of *ačʹys*. The head F shares features with T (Chomsky 2008), which explains the subject-orientation of the semi-reflexive. Similarly to my treatment of Meadow Mari, if *ačʹys* contains a plural possessive marker, we only have to assume that F restricts its domain to pluralities that are sufficiently salient, in particular those that F bears a relation to, namely pluralities containing the (denotation of the) local subject.

Assuming that infinitival clauses have a deficient F, which depends for its value on the first finite F, timing details determine whether they can get passed

by. Supposing there is another equidistant functional head in the left periphery of the infinitival clause, it can serve as an escape hatch for long-distance interpretation (see the treatment of the infinitival clauses in Meadow Mari in section 3.4.2 as well as the account for long-distance binding of Scandinavian *seg/sig* in (Reuland 2011: ch. 8)).

Pechora Komi-Zyrian differs from Meadow Mari, as *ač'ys* can be long-distance bound in the participial clauses formed with *-əm-*. As discussed in section 4.4.2, these participles can relativize various positions (subject, direct object, localization, DO possessor) and express actions in the past, perfectivity (the reference to the present is only possible when it modifies locative arguments) – for details see Brykina and Aralova (2012). They contrast with the participles with *-is'* which relativize only the subject position. Moreover, the participles with *-is'* express an action simultaneous with the tense of the main clause or with the present tense if there are no other tense markers. I suggest that long-distance binding of *ač'ys* becomes possible with the participles formed with *-əm-* because this type of participles have a deficient T node. The participial clauses formed with *-əm-* denote a situation in the past in most cases. Thus, although they are compatible with the adverb *təryt* ‘yesterday’ I expect they would not be compatible with other adverbs of time. There are two possible options. The first one is that the left periphery is also deficient to the extent that the local head F cannot value the deficiency of *ač'* and gets skipped in favour of a higher finite F. The second one is that in the participial clauses formed with *-əm-* the T node does not project the SpecTP. Some support for these options comes from the fact that unlike in the infinitival clauses in this context local PRO is never an option for binding *ač'ys*, the matrix subject is the only possible antecedent (cf. (20) on p. 94). The second option would predict that with no SpecTP *ač'ys* becomes exempt.

Another way to account for the difference between the participial clauses formed with *-is'* and those formed with *-əm-* in terms of binding constraints on *ač'ys* would be to assume that the latter have a richer Force projection in the left periphery. Hence, it might contain not only a deficient F head, but also an alternative F-projection to attach to as an escape hatch, similarly to what happens in the infinitival clauses. In this case, the variation with the Izhma dialect, where *ač'ys* can be long-distance bound in participial clauses formed both with *-əm-* and with *-is'*, can be accounted for as a simple parametric difference in the presence of an “escape F”.

***Ač'ys* in Izhma Komi-Zyrian**

In the Izhma dialect *ač'ys* must be bound within the first finite clause. The requirement for a subject antecedent is not absolute (see methodological remarks in section 4.9). Given the syntactic properties of *ač'ys*, there are two possible lines of thought to account for the behaviour of this semi-reflexive. If we assume that in Izhma Komi-Zyrian *ač'ys* is interpreted in the same way as

in Pechora and Meadow Mari, through the left-periphery, one would have to postulate that all the non-finite embedded clauses in the Izhma dialect have a deficient or weak left periphery which would make them transparent for binding. The other option is that *ač'*- does not require a link to the Force head F for interpretation. Like in Pechora, *ač'ys* composes with the Skolem function directly. The choice of the antecedent depends on the properties of the possessive suffix. Under the assumption that the possessive suffixes should be bound within a finite clause the syntactic constraints on *ač'ys* ensue. The requirement for possessive suffixes to be locally bound implies that they are deficient in some way, yet not in such a way that it could be valued by an A-chain.

This approach accounts for the availability of split antecedents as well as for the binding constraints of *ač'ys*. The following example illustrates that Izhma *ač'ys* behaves differently from its counterparts in Pechora Komi-Zyrian and Meadow Mari: when asked to interpret the sentence in (50) the speaker provided an inclusive reference reading.

- (50) Mam-ys_i p'etkedl-i-s č'el'ad'-se_j as-ly-ny-s_{i+j+k}.
 mother-3 show-PRT-3 child-ACC.3 self-DAT-PL-3
The mother showed the child to themselves (everyone in the room).
 [Izhma]

The proposed approach is supported by the behaviour of the bare form *as* in nominalizations. As example (37) (p. 98) shows, in this context *as* allows long-distance binding by the matrix antecedent. As a complement of a postposition, it cannot move onto the verb to enforce reflexivity, thus it behaves as the English *himself* in exempt positions. The dependency is established by the possessive suffix. I have to leave the systematic exploration of the syntactic properties of the possessive suffixes in Izhma for further research.

4.8 Dative experiencer predicates

In Komi-Zyrian *ač'ys* as an argument of a dative experiencer predicate in an embedded relative clause can be bound by an argument of a matrix clause, even if the relative clause is finite, thus violating the previously established locality constraints.

4.8.1 Pechora

Example (51) presents a contrast between *ač'ys* as an argument of a dative experiencer verb and as an argument of subject experiencer verb in a participial clause. As (51a) shows, usually in the embedded participial clauses formed with *-is'*, *ač'ys* must be locally bound. However, as an argument of a dative experiencer predicate in (51b), *ač'ys* can be bound by the matrix subject but not locally.

- (51) a. Pet'a_i gətras'-i-s [as'-sə*_{i/j} rad'ejt-is'] nyl_j vyl-yn.
 Peter marry-PRT-3 self-ACC.3 love-PTCP.ACT girl up-INESS
Peter married a girl who loved herself. [Pechora]
- b. Pet'a_i tədməd-i-s Vas'a-əs_j [kažitč'-is'] as-ly-s_{i/*k}]
 Peter introduce-PRT-3 Vasja-ACC appeal.to-PTCP.ACT self-DAT-3
 nyvka-kəd_k.
 girl-COMIT
Petja introduced Vasja to a girl that appealed to him(self). [Pechora]

The example with a subject experiencer verb *rad'ejtny* 'love' (52a) illustrates the fact that normally *ač'ys* must be locally bound in an embedded finite relative clause. In the parallel example (52b), *ač'ys* is an argument of a dative experiencer predicate in an embedded finite relative clause. It is long-distance bound by the matrix subject of the clause *bat'ys* 'father' and cannot be locally bound.

- (52) a. Pet'a_i tədməd-i-s Vas'a-əs_j nyv-kəd_k [kodi as-ly-s_{k/*i/*j}
 Peter introduce-PRT-3 Vasja-ACC girl-COMIT which self-DAT-3
 rad'ejt-i-s].
 love-PRT-3
Peter introduced Vasja to a girl who loves herself. [Pechora]
- b. Bat'-ys_i tədməd-i-s pi-sə_j nyv-kəd_k [kodi as-ly-s_{i/*k}
 father-3 introduce-PRT-3 son-ACC.3 girl-COMIT which self-DAT-3
 kažitč'-i-s].
 appeal.to-PRT.3
The father introduced his son to a girl who appealed to him(self).
 [Pechora]

In Pechora Komi-Zyrian, *ač'ys* violates the previously established locality constraints as in (51b)–(52b) when being an argument of the dative experiencer verb *kažitč'iny* 'appeal to'.

- (53) Sy-ly kan' kažitč'-ə.
 that-DAT cat appeal.to-PRS.3
He likes the cat. [Pechora]

This verb marks the experiencer with the dative case, and the theme (stimulus) with the nominative. The nominative theme serves as a grammatical subject of the sentence.

4.8.2 Izhma

As it was shown in section 4.4.2, in the Izhma dialect of Komi-Zyrian the pronoun *ač'ys* can take long-distance antecedents across a participial clause boundary. However, it must be bound within the first finite clause. Therefore,

it is puzzling that *ač'ys* as an argument of a dative experiencer predicate in a finite relative clause allows long-distance binding by the matrix subject. In Izhma Komi-Zyrian this happens in the context of the verbs *lës'alny* 'appeal to' (54) and *kolny* 'be necessary' (60b).

- (54) Petra_i gətral-i-s pij-se_j nyy_k vyl-e kod-ys as-ly-s_{i/j/*k}
 Peter marry-PRT-3 son-ACC.3 girl on-ILL which self-DAT-3
 lës'al-e.
 appeal.to-PRS.3
Peter married his son to a girl, who appealed to him. [Izhma]
- (55) Pet'a_p kor-i-s Maša-lys'_m kniga-se [kodys as-l-ys_{p/m}
 Petja demand-PRT-3 Masha-GEN2 book-ACC.3 which self-DAT-3
 kol-e].
 need-PRS.3
Petja demanded from Masha a book that was necessary to him / her.
 [Izhma]

Both verbs *lës'alny* 'appeal to' and *kolny* 'be necessary' mark the experiencer with the dative case, and the theme (stimulus) with the nominative.

The complex reflexive *ač'ys as'se* does not allow long distance binding when an argument of a dative experiencer predicate in an embedded relative clause – cf. (56).

- (56) *Ivan_i gətral-i-s pij-se_j nyy vyl-yn kodys ač'-is as-ly-s_i
 Ivan marry-PRT-3 son-ACC.3 girl with-INESS which self-3 self-DAT-3
 lës'al-e.
 appeal.to-PRS.3
 Int.: Ivan married his son to the girl which appeals to him. [Izhma]

4.8.3 Discussion

The analysis that I proposed for the context of dative experiencer predicates in Meadow Mari (see section 3.5.2) easily extends to Komi-Zyrian modulo the ways dependencies are established in the Izhma and Pechora dialects. The psych predicates of the *appeal to*-type have an unaccusative derivation, assigning inherent case to the experiencer argument VP-internally (Belletti and Rizzi 1988). The experiencer projects into a higher VP-internal position than the theme, but the latter can undergo a subsequent A-movement to get the nominative case marking. In simple clauses the theme undergoes A-movement and thus can bind *ač'ys*. 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. Hence, in relative clauses with dative experiencer verbs unlike with agent-theme verbs *ač'ys* occupies a relatively high position with respect to its envisaged binder due to the absence of the EPP feature on T.

In the Pechora dialect, *ač'ys* behaves similarly to its counterpart in Meadow Mari. I propose that because the SpecTP position is left unfilled in the relative clauses with the dative experiencer verbs, the semi-reflexive does not get syntactically linked to a possible antecedent in SpecTP through the F head in the left periphery, and thus becomes exempt. I expect that in a sentence with multi-layer embedding, the Pechora *ač'ys* can go even higher in search of an antecedent than the closest subject of a finite clause.

In section 4.7.2, I proposed that the Izhma *ač'ys* is exempt and it is the possessive suffixes inside it that are responsible for the interpretation. This idea can be extended to the case of relative clauses with dative experiencer predicates. In this context *ač'ys* is higher in the structure than the theme which would normally occupy the SpecTP position. I assume that when the possessive suffix inside the Izhma *ač'ys* searches for an antecedent, it goes up the spine, skipping the empty SpecTP. This idea could be supported by the fact that in contrast with Pechora Komi-Zyrian and Meadow Mari *ač'ys* can be bound by any argument of the higher clause (in Meadow Mari it was only possible in case of a feature clash with the matrix subject).

In this section I discussed the behaviour of the pronoun *ač'ys* in the context of dative experiencer predicates in embedded relative clauses. It turns out that, in such an environment, similarly to its counterparts in other Finno-Ugric languages in focus, *ač'ys* behaves as an exempt pronoun, and can be bound by very distant antecedents. The account is based on the assumption that T in embedded relative clauses is weaker, and due to the absence of an EPP feature the movement of theme argument is not triggered, hence *ač'ys* occupies an unusually high position.

4.9 Methodology

There is a number of points in which my data is inconsistent or inconclusive. They are listed below. For the purposes of this dissertation I had to put these issues aside for now until I have determined whether they constitute real variation or they are just slips of the tongue.

First of all, the question whether in Izhma Komi-Zyrian *ač'ys* allows non-subject antecedents is not very clear. In example (57a), according to some speakers, *ač'ys* can be bound by both the subject and the object. Yet, in (57b) the same pair of speakers interpreted the plural form of *ač'ys* as having an *i+kin* type of antecedent (someone plus a set of close relatives), while it would be only natural to interpret it as bound by a plural object, given that (57a) is correct – cf. (58) elicited from a different speaker. On these grounds I would ignore this possibility for now and consider it a matter for further research.

- (57) a. Aj-ys_i p'etkedl-i-s pij-ys-ly_p vizlis'an-a-s as'se_{i/p}.
 father show-PRT-3 son-3-DAT mirror-INNESS/ILL-3 self-ACC.3
The father showed his son himself in the mirror. [Izhma]
- b. Mam-ys_i p'etkedl-i-s č'el'ad'-jas-ly_j as'ny-s-se_{i+k} fotografija
 mother-3 show-PRT-3 child-PL-DAT self-PL-3-ACC.3 photo
 vyl-a-s.
 on-INNESS/ILL-3
*The mother showed the children themselves (mother + father) on
 the photo.* [Izhma]
- (58) Mam-ys p'etkydl-i-s č'el'ad'-jas-ly_c as'ny-s-se_c fotokartočka
 Mother-P.3 show-PRT-3 child-PL-DAT self-PL-P.3-P.3.ACC photo
 vyly.
 on
The mother showed to the children themselves on a photo. [Izhma]

As regards Pechora, in several instances, some speakers allowed long-distance binding of *ač'ys* in the embedded nominalized clauses. There are two options here. Pechora Komi-Zyrian, just like Meadow Mari, allows two types of nominalizations: one with the subject encoded with Nominative, in which case the nominalization happens at the level of VP, and the other with the subject in Genitive which preserves the internal clause structure and is nominalized at the level of TP. Given that in (59) there is no overt subject, it is quite possible that in this case the verb is nominalized at the level of VP. If so, *ač'ys* might allow long-distance binding because it is in an exempt position similar to the picture NPs.

- (59) Bat'_i s'et-i-s d'en'ga pij-əs-ly_j [as'sə_i lečit-əm] vysna.
 father give-PRT-3 money son-3-DAT self-ACC.P.3 treat-NZR for
The father gave the son money for his (own) medical treatment.
 [Pechora]

If example (59) instantiates a nominalization at the level of TP, it is worth mentioning that according to Natalia Serdobolskaya (p. c.), in Pechora Komi-Zyrian such nominalized constructions do not allow negation. Plus there is inter- and intraspeakers variation as to what kind of modifiers they allow: adjectives or adverbs. Both these facts indicate that the T node might be deficient – cf. the discussion of participles formed with *-əm-* in section 4.7.2. Whether or not this pattern is recurring has to be left for further research.

In Izhma Komi-Zyrian I had to put aside examples with nominalizations where the nominalized verb took the accusative form *as'se* as an argument: in the nominalized clauses in the Izhma dialect the direct object should be encoded with the nominative case. There were also a few examples of the long-distance binding over a finite clause boundary: one speaker pro, one speaker contra the grammaticality of such sentences, not enough data for any conclusions.

The last piece of data that was not included has to do with the dative experiencer predicate *kolny* ‘be necessary’. Examples (60a) and (60b) are very similar in structure, yet judged very differently by the speakers.

- (60) a. ?*Maša_i vaj-i-s Van'a-ly_j kniga [kod as-ly-s_i kol-e].
 Masha bring-PRT-3 Vanja-DAT book which self-DAT-3 need-PRS.3
 Int.: Masha brought Vanja a book that was necessary to her.
- b. Pet'a_p kor-i-s Maša-lys'_m kniga-se [kodys as-l-ys_{p/m}
 Petja ask-PRT-3 Masha-GEN2 book-ACC.3 which self-DAT-3
 kol-e].
 need-PRS.3
Petja asked Masha for a book that was necessary to him / her.

What is striking about the contrast in (60) is that in (60a) we have some ‘objective’ necessity, while in (60b) the necessity is experienced. Rákosi (2006) in a study of dative experiencer predicates in Hungarian distinguishes two types of predicates with strikingly different syntactic properties: ones that take thematic dative adjuncts and ones that take dative arguments. In (60), it seems that the environment, introducing an argument as a potential experiencer of the necessity, may coerce a thematic adjunct to be construed as an argument.

4.10 Summary

In this chapter I discussed the data from two dialects of Komi-Zyrian: Izhma and Pechora. In the Pechora dialect, the system of encoding reflexivity is very similar to that of Meadow Mari with two exceptions: in Pechora there is no complex reflexive and the Pechora semi-reflexive *ač'ys* can be long-distance bound as an argument of a participial clause formed with *-əm*. I offer an explanation to this in terms of parametric variation in the left periphery of such clauses.

In the Izhma dialect, reflexivity can be licensed with the help of the verbal detransitivizing suffixes *-č'* and *-ys'* (only with a closed subclass of agent-theme verbs), a complex reflexive *ač'ys as'se* and a semi-reflexive *ač'ys*. The complex reflexive must be locally bound and does not allow split antecedents. The semi-reflexive needs to be bound within a finite clause but unlike in Pechora it allows long-distance binding into all types of non-finite embedded clauses.

CHAPTER 5

Besermyan Udmurt

5.1 Language profile

Udmurt [udm] is a Uralic language of the Permic subgroup (together with Komi-Permyak and Komi-Zyrian) spoken in the Russian Federation by more than 324,000 people (2010 census, data from Lewis et al. (2013)) with the ethnic population exceeding 550,000. The speakers of Udmurt live primarily in the Udmurt Republic (the capital is Izhevsk, 1,000 km northeast of Moscow), some also in Kazakhstan.

The dialect of Udmurt described here is called Besermyan. Besermyans are a distinct ethnic group presumably of Turkic descent (possibly Bulgars) speaking Udmurt (Teplyashina 1970). According to the 2010 census, the number of Besermyans is about 2,200 (down from more than 3,100 in 2002) living in the northwest of the Udmurt Republic. The data was compiled through questionnaires in the village of Shamardan in Udmurt Republic in the years 2003, 2004, 2011 and 2012 during field trips organized by Moscow State University¹.

In the verbal domain Besermyan Udmurt distinguishes four tenses: present, future, past and past perfect. The negative forms in present, future and past are analytical with a negative auxiliary verb bearing person and number features and a verbal stem. In the past perfect the negative forms can be both synthetic

¹I am very grateful to the following people who kindly helped with my questionnaires: Natalia Serdobolskaya, Maria Brykina, Yulia Adaskina, Yevgenia Prozorova, and especially Ruslan Idrisov, who also helped me greatly with his comments on various aspects of the language.

and analytical. In the nominal domain it employs fifteen cases and possessive affixes. Besermyan is characterized by differential object marking: the direct object of the verb can have no marking, be marked with Accusative or possessive Accusative depending on the referential status of the NP and the information structure of the sentence (Toldova and Serdobolskaya 2012).

Besermyan does not have its own script, the use of the Udmurt script is hindered by the fact that Besermyan has an extra vowel in comparison to literary Udmurt. The language is mainly used by the older and middle generation (35 and older), younger people know the language but prefer to use Russian among themselves. Children mainly speak Russian². Shamardan only has an elementary school. In order to continue education, children from Shamardan go to the secondary school in a larger Russian speaking village (Ruslan Idrisov, p. c.).

5.1.1 Possessive suffixes

The possessive suffixes in Besermyan Udmurt are attached to the head noun and express the number and person of the possessor. Just like in Meadow Mari, Besermyan Udmurt possessive suffixes behave as pronouns in many respects. Similarly to Komi-Zyrian, Besermyan Udmurt distinguishes two genitive cases: Genitive2 *-lâš'* is used for possessors inside the direct object NP (1), Genitive1 *-lân* – for possessors in all other positions (2).

- (1) Mon abi-leš' skal-z-e šed't-i.
 I grandmother-GEN2 cow-P.3-ACC find-PRT
I found grandmother's cow.
- (2) Abi-len skal-ez aldaš'k-i-z.
 grandmother-GEN1 cow-P.3 get.lost-PRT-3
Grandmother's cow got lost.

The data that I have appears to be somewhat contradictory (see below and the section 5.7). Based on (3) it seems that the possessive suffixes in Besermyan, unlike Meadow Mari, need to be locally bound if a referential antecedent is locally available.

- (3) Ivan_i aš'-e kâšno-z_i/*k-e.
 Ivan see-PRS.3SG wife-P.3-ACC
Ivan sees his wife.

However, in a more neutral context in (4), both a local and a discourse reading are available.

²Udmurt is taught at schools of the Udmurt Republic on a voluntary basis. According to the data of the ministry of education and science of the republic, in 2013 15,860 children attended the classes of Udmurt, which constitutes 10,3% of the number of schoolchildren in the Udmurt Republic.

- (4) Ivan_i mašina-z_{i/k}-e garaž-e pukt-i-z.
 Ivan car-P.3-ACC garage-E put-PRT-3
Ivan put his car into the garage.

The relation between the possessive suffix and the antecedent can be binding in addition to coreference, cf. (5) which shows the availability of strict and sloppy readings for the possessive suffix -z-.

- (5) Soos pəl-əš' Ivan gine jarat-e kəšno-z_{i/k}-e.
 they milieu-EL Ivan only love-PRS.3SG wife-P.3-ACC
Among them only Ivan loves his wife (, the rest don't like her. – ^{OK}strict)
Among them only Ivan loves his wife (, the rest don't love their wives.
 – ^{OK}sloppy)

This conclusion is also supported by the sentences with non-referential antecedents *kot'kudiz* 'everyone' (6), *nokin'no* 'no one' (7), and a wh-word *kin'* 'who' (8). In all three cases a discourse antecedent is an option on a par with a bound reading.

- (6) Kot'kudiz_i mašina-z_{i/k}-e garaž-e pukt-i-z.
 everyone put-PRT-3 car-P.3-ACC garage-ILL
Everyone put his car into the garage.
- (7) Nokin'no_i mašina-z_{i/k}-e garaž-e e-z pukt-ə.
 no.one car-P.3-ACC garage-ILL NEG-3 put-PRT.SG
No one put his car into the garage.
- (8) Kin'_i pukt-i-z mašina-z_{i/k}-e garaž-e?
 who put-PRT-3 car-P.3-ACC garage-ILL
Who put his car into the garage?

I conclude that possessive suffixes in Besermyan Udmurt can be bound, but can also take discourse antecedents.

5.1.2 Reflexive strategies

Pronominals cannot be locally bound in Besermyan Udmurt.

- (9) Ataje_i kwaret-i-z so-je*_{i/k}.
 father curse-PRT-3 he-ACC
*The father cursed him / *himself.*

Besermyan employs two types of reflexive strategies: verbal and nominal ones. The verbal strategy is instantiated by the detransitivizing suffix -iš'k- and limited to a closed subclass of agent-theme verbs in line with Reinhart and Siloni (2005). The nominal strategy is represented by the semi-reflexive *ač'iz*

and the complex structure *asôze ač'iz*. Both of them are used as an object of a transitive predicate to license that the arguments of the predicate are covalued. The first part of the chapter is devoted to the description of the reflexive strategies. The second part presents an analysis for the cases of split antecedents and dative experiencer predicates in participial clauses.

5.2 Detransitivization

5.2.1 Description

According to Prozorova and Kolomatskij (2003), Besermyan Udmurt employs the detransitivizing suffix *-iš'k-* (*-š'k-* if verbal stem ends with [a] (10a); *-ik-* if the verbal stem ends with an alveolar plosive like [t] which turns into *č'* (10b)).

- (10) a. kal'l'a-nô /hang-INF/ 'to hang' – kal'l'a-š'k-ônô /hang-DETR-INF/
'to hang oneself'
b. bin'alt-ônô /muffle-INF/ 'wrap, muffle' – bin'alč'-ik-ônô /muffle-DETR-
PRS.3SG/ 'muffle oneself'.

The suffix *-iš'k-* can be used to encode reflexivity only with a limited number of verbs, which are a subgroup of agent-theme verbs – mostly grooming verbs (11), but not only these, cf. (12)-(13).

- (11) a. Anaj pič'i pin'al-z-e kôl'i-z.
mother little child-P.3-ACC undress-PRT-3
The mother undressed her little child.
b. Už'-ônô vâd-em-leš' wal'l'o mon kôl'-iš'k-iš'ko.
sleep-INF lie.down-NZR-GEN2 before I undress-DETR-PRS
Before I got to bed, I undress.
- (12) a. Pet'a ôb-i-z šermač'-ez.
Peter shoot-PRT-3 criminal-P.3
Peter shot the offender.
b. Pet'a ôb-iš'k-i-z.
Peter shoot-DETR-PRT-3
Peter shot himself.

In (13), the suffix *-iš'k-* is used for detransitivizing the verb *vož'manô* 'guard, watch' with the argument structure <NOM who; ACC what; GEN2 from whom / what>. The resulting verb *vož'maš'kônô* is syntactically intransitive, but preserves the ability of taking an oblique object (13b).

- (13) a. Brate as-ôz-e ač'-iz vož'ma-z.
brother self-P.3-ACC self-3 guard-3
The brother defended himself.

- b. Brate *(gəndər-liš') vož'ma-š'k-i-z.
 brother bear-GEN2 guard-DETR-PRT-3
The brother defended himself from a bear.

The suffix *-iš'k-* can also be used to derive passive (14), reciprocal (for inherently reciprocal verbs) (15)-(16) and impersonal forms (17) (Prozorova and Kolomatskij 2003).

- (14) Korka ž'og pukt-iš'k-e.
 house fast build-DETR-PRS.3SG
The house is being built fast. (Prozorova and Kolomatskij 2003)
- (15) kək vən'n'-oz ž'əgərc'-ik-i-z-ə.
 two brother-PL hug-DETR-PRT-3-PL
Two brothers hugged. (Prozorova and Kolomatskij 2003)
- (16) Mi vera-š'k-iš'ko-m.
 we talk-DETR-PRS-1PL
We talk (with each other). (Prozorova and Kolomatskij 2003)
- (17) Pənə kurč'əl-iš'k-e.
 dog bite-DETR-PRS.3SG
The dog bites. (Prozorova and Kolomatskij 2003)

5.2.2 Analysis

The Besermyan detransitivizing suffix *-iš'k-* presents one of the ways to satisfy the IDI constraint, namely by ensuring that no offending variable is projected. I propose that, similarly to Meadow Mari, detransitivization in Besermyan Udmurt instantiates a bundling operation in the sense of Reinhart and Siloni (2005). This in turn reduces the internal argument of a predicate and forms a composite θ -role from the internal and external θ -roles (see discussion in section 1.3.2). In example (18), the sentence (18b) presents the transitive verb *miš'kənə* 'wash' and (18b) its derived counterpart *miš'taš'kənə* 'wash oneself' which cannot take an internal argument, namely it is syntactically intransitive.

- (18) a. So as-əz-e miš'k-i-z.
 he self-P.3-ACC wash-PRT-3
He washed himself.
- b. So (*as-əz-e) miš'-t-aš'k-i-z.
 he self-P.3-ACC wash-TR-DETR-PRT-3
He washed.

Given that Besermyan Udmurt has a Nominative-Accusative distinction, the object comparison test (Zec 1985) for establishing intransitivity would not work here. Further, Dimitriadis and Everaert (2012) propose that compatibility

with adverbs like *painfully* or *completely* shows that such verbs retain the theme role and, hence, have both agent and patient/theme semantic roles syntactically encoded and accessible. Section 2.2.1 discusses another counterpart of the suffix *-iš'k-*, the detransitivizing suffix *-ij(t)-* in Tegi Khanty. The detransitivized verbs in Khanty are compatible with the adverb *tälantetn* ‘completely, as a whole’ which targets the explicit theme/patient role. This shows that the verb derived with the suffix *-ij(t)-* retains the theme role and semantically is a two-place predicate.

The test on the availability of proxy readings in the Mme. Tussaud wax museum context can also be used to prove that the verbs which have undergone detransitivization with the suffix *-iš'k-* are syntactically intransitive. For instance, in Meadow Mari the detransitivizing suffixes *-alt-* and *-olt-* behave very similarly to Besermyan *-iš'k-* both in the scope of functions and in the range of verbs compatible with the suffix. As shown in section 3.3.1, the test on the availability of proxy readings shows that the verbs combined with the suffixes *-alt-* and *-olt-* are syntactically intransitive. The same happens in Besermyan Udmurt, as shown in (19). In (19a), the transitive verb *miš'kənδ* ‘wash’ is used with a direct object *asδ-z-e* (*ač'-iz*) which allows a proxy interpretation. However, such interpretation is no longer possible once the verb undergoes bundling marked by the suffix *-iš'k-* (19b), hence it is intransitive.

- (19) {*LC: A Russian pop-diva learnt that there is a statue of her in the city X. Out of curiosity she visited the city only to discover that the statue was in neglect and very dirty.*}

- a. Ber uj-ōn so lušk-em ləkt-i-z ploš'ad'-e i
late night-INESS s/he steal-NZR come-PRT-3 square-ILL and
asδ-z-e (ač'-iz) miš'k-i-z.
self-P.3-ACC self-P.3 wash-PRT-3
Late at night she came to the square by stealth and washed herself.
(^{OK}herself, ^{OK}statue)
- b. Ber uj-ōn so lušk-em ləkt-i-z ploš'ad'-e i
late night-INESS s/he steal-NZR come-PRT-3 square-ILL and
miš'-t-aš'k-i-z.
wash-TR-DETR-PRT-3
Late at night she came to the square by stealth and washed. (^{OK}herself,
*statue)

In this section I showed how the IDI constraint of the computational system of human language can be satisfied in Besermyan Udmurt with the help of a detransitivization operation on the predicate marked with the suffixes *-iš'k-*. The evidence for the reduction of the internal argument comes from the unavailability of proxy-readings for the detransitivized predicates.

5.3 The pronoun *ač'iz*

5.3.1 Some remarks on morphology

The Udmurt pronoun *ač'iz* along with the Meadow Mari *ške*, the Komi-Zyrian *ač'ys* and the Erzya *es'* stems from a noun meaning 'soul, spirit' (Collinder 1955; Paasonen 1917; Alatyrev 1988). The Udmurt *ač'iz* inflects for case and bears a possessive affix which agrees in number and person with the antecedent. In that respect the forms of *ač'iz* are reminiscent of the forms of a possessive NP. The case and possessive markers are attached to the stem *ač'-/aš'-/as-* (*ač'iz* 'self-3', *aš'-s-es* 'self-3-PL', *as-sδ-len* 'self-3-PL-GEN1') (see the paradigm of *ač'iz* in table 5.1).

Teplyashina in her grammar of Besermyan (Teplyashina 1970: 187-188) notes that the declension of *ač'iz* in Besermyan Udmurt is considerably different from the declension of its counterpart in literary Udmurt. In contrast with literary Udmurt, the Besermyan semi-reflexive in almost all the oblique cases except Approximative has a stem *as-/aš'*. This observation is mostly confirmed for the core cases – cf. table 5.1, but in the non-core cases at present the speakers of Besermyan often use the forms with the stem *ač'* – as in the literary Udmurt along with the forms with the stem *as-*, cf. the parallel forms for Caritive *ač'-iz-tek* and *as-δz-tek* 'self-3-CAR'. Besides, the paradigm of *ač'iz* is characterized by a high degree of inter-speaker and intra-speaker variation.

The pronoun *ač'iz* also has a bare form *as*, a form without any case and possessive markers, which is used in postpositional phrases (20). Unlike in Meadow Mari or Izhma Komi-Zyrian, the bare form *as* cannot be used as a possessive reflexive (21), at least not as an argument of a direct object NP.

- (20) Mama-ez pin'al-z-e puk-t-i-z as dor-a-z.
 mother-P.3 child-P.3-ACC sit-TR-PRT-3 self near-INESS/ILL-P.3
The mother put the child next to her(self).

- (21) Ataj-ez ušja-z *(as) nəl-z-e.
 father-P.3 praise-3 self daughter-P.3-ACC
The father praised his daughter.

5.3.2 Syntactic properties

The relationship between *ač'iz* and its antecedent can be binding which is highlighted if the subject is non-referential, cf. (22).

- (22) Nokin'no as-δz-e ug jarat-ə.
 no.one self-P.3-ACC NEG like-SG
No one likes himself.

Case	Person & Number					
	1SG	2SG	3SG	1PL	2PL	3PL
NOM	<i>ač' -im</i>	<i>ač' -id</i>	<i>ač' -iz</i>	<i>aš' -me -z</i>	<i>as -te -z</i>	<i>aš' -se -z</i>
				<i>as -me -z</i>	<i>aš' -te -s</i>	<i>as -se -z</i>
				<i>as -me -s</i>	<i>as -te -s</i>	<i>as -se -s</i>
GEN1	<i>aslam</i>	<i>aslad</i>	<i>aslaz(a)</i>	<i>aš' -mê -len</i>	<i>as -tê -len</i>	<i>as -sê -len</i>
				<i>aš' -me -len</i>	<i>aš' -tê -len</i>	<i>aš' -sê -len</i>
GEN2				<i>as -mê -len</i>	<i>aš' -te -len</i>	<i>aš' -se -len</i>
				<i>aslam</i>		
	<i>as -liš' t -ôm</i>	<i>as -liš' t -ôd</i>	<i>as -liš' t -ôz</i>	<i>aš' -mê -lâš'</i>	<i>aš' -tê -lâš'</i>	<i>aš' -sê -lâš'</i>
				<i>as -mê -leš'</i>	<i>as -tê -leš'</i>	<i>as -sê -leš'</i>
				<i>as -mê -lâš'</i>	<i>aš' -te -lâš'</i>	<i>aš' -sê -leš'</i>
DAT	<i>as -lê -m</i>	<i>as -lê -d</i>	<i>as -lê -z</i>	<i>as -mê -lê</i>	<i>as -tê -lê</i>	<i>as -sê -lê</i>
	<i>as -mê -lê</i>		<i>as -sê -lê</i>	<i>aš' -me -lê</i>	<i>aš' -tê -lê</i>	<i>aš' -sê -lê</i>
			<i>as -ôz -lê</i>	<i>as -lê -m</i>		
			<i>ač' -iz -lê</i>			
ACC	<i>as -ôm -e</i>	<i>as -ôd -e</i>	<i>as -ôz -e</i>	<i>as -m -e -s -tê</i>	<i>as -t -e -s -tê</i>	<i>as -s -e -s -tê</i>
	<i>as -lê -me</i>	<i>as -lê -de</i>	<i>as -lê -z -e</i>	<i>aš' -m -e -s -tê</i>	<i>as -ôd -e -s</i>	<i>as -ôz -e -s</i>
			<i>ač' -iz -e</i>			
			<i>aš' -s -e</i>			

Table 5.1: The forms of *ač'iz* in the non-local cases (Idrisov 2013)

The Besermyan semi-reflexive *ač'iz* requires a c-commanding antecedent (23). Moreover, the antecedent should be a subject of the clause (24a). If two non-subject arguments are co-valued, it is expressed with the help of a pronominal in the respective person, for instance a third person pronominal *so* (24b). This fact shows that in Besermyan Udmurt a dependency between *ač'iz* and its antecedent is established in a different way than for the English *himself* or the Dutch *zichzelf* – cf. (25) (for further discussion see section 5.5).

- (23) Ataj-ez-lən_i suzer-ez_j as-âz-e_{j/*i} ušja-z.
father-P.3-GEN1 sister-P.3 self-P.3-ACC praise-PRT.3
Father's sister praised herself.
- (24) a. Ataj_i vož'ma-t-i-z vôn-ez-lô_j aš'-s-e_{i/*j}.
father watch-TR-PRT-3 brother-P.3-DAT self-P.3-ACC
The father showed himself to the brother.
b. Ataj_i vož'ma-t-i-z vôn-ez-lô_j so-je_{*i/j}.
father watch-TR-PRT-3 brother-P.3-DAT self-P.3-ACC
The father showed to the brother himself.
- (25) Per ongeluk wees Jan_i Marie_j aan zichzelf_{i/j} toe. [Dutch]
by accident assigned John Mary to SE-SELF
Accidentally John assigned Mary to herself / himself. (Reuland 2011: 282)

However, if the predicate is passivized, and the subject of the clause is inanimate, *ač'iz* can be bound by the demoted agent.

- (26) Ta keseg kot'kudiz dâšetâš'-len / dâšetâš'-en nal'l'a-mân val
this plot every teacher-GEN1 / teacher-INSTR search-RES be.PRT
as-lô-z.
self-DAT-P.3
This plot of land was chosen by every teacher for himself.

Within a simple clause the semi-reflexive *ač'iz* can fill the positions of direct object (27), indirect object (28) and non-coargument positions (29).

- (27) Ataj-e kwar-et-i-z asla-z-e.
father-P.1 curse-TR-PRT-3 self-3-ACC
My father cursed himself.
- (28) Van'a_i as-lô-z ač'-iz_i / as-lô-z_i n'an' baš'-t-i-z.
Vanja self-DAT-3 self-3 / self-DAT-3 bread take-SMLF-PRT-3
Vanja bought himself bread.

In Besermyan Udmurt in postpositional phrases it is possible to use the bare form *as* and the genitive form of the full pronoun *aslaz* as in (29) and

(31b), as well as the nominative form of the full pronoun *ač'iz* (31a). Similarly to Meadow Mari and Erzya if the postposition expresses localization the semi-reflexive can be omitted (29).

- (29) Mama-ez pin'al-z-e puk-t-i-z (aslaz / as) dor-a-z.
 mother-3 child-3-ACC sit-TR-PRT-3 self.GEN1.3 / self near-INESS/ILL-3
The mother put the child next to herself.

If the complement of a localization postposition is a bare form *as* or a genitive form *aslaz*, it is illicit in Besermyan Udmurt to omit the possessive suffix on the postposition (30).

- (30) *Mama-ez pin'al-z-e puk-t-i-z aslaz / as dor.
 mother-3 child-3-ACC sit-TR-PRT-3 self.GEN1.3 / self near
 Int.:The mother put the child next to herself.

Speakers differ as to whether it is possible to have a postposition not marked with a possessive suffix if the complement of a locative postposition is a nominative form *ač'iz*. The younger speakers easily produce examples like (31a), while the older ones often consider such sentences illicit and prefer the variant presented in (31b).

- (31) a. ?Ataj_i ač'-i-z vôn-ez-lôš'_j kôšno-z-e ač'-iz_i dor-ôš'.
 father see-PRT-3 brother-P.3-GEN2 wife-P.3-ACC self-P.3 near-EL
The father saw the wife of the brother next to himself.
 b. Ataj_i vôn-ez-lôš'_j kôšno-z-e as_i / as-la-z_i / ač'-iz_i
 father brother-P.3-GEN2 wife-P.3-ACC self / self-GEN1-P.3 / self-P.3
 dor-ôš't-ôz ač'-i-z.
 near-EL-P.3 see-PRT-3
The father saw the wife of the brother next to himself.

The Udmurt *ač'iz* must be locally bound. In (32), *ač'iz* is an argument of an embedded infinitival clause, it cannot be covalued with the subject of the matrix clause. In reference to the latter, the third person pronominal *so* is used.

- (32) Ivan_i kos-i-z kôšno-ez-lô_j [*asô-z-e_i / so-je_i sajkat-ônô].
 Ivan tell-PRT-3 wife-P.3-DAT self-P.3-ACC / he-ACC wake.up-INF
Ivan told his wife to wake him up.

Similarly, in the embedded participial (33) and nominalization clauses (34), *ač'iz* must be locally bound as well.

- (33) Van'a_i môn-i-z [as-lô-z*_{i/j} / so-lô_i korka baš'-t-iš']
 Vanja go-PRT-3 self-DAT-P.3 / he-DAT house take-SMLF-PTCP.ACT
 Vaš'a_j dor-ô.
 Vasja near-ILL
Ivan went to Vasja who bought himself/him a house.

- (34) Ataj-ez-lî_i jara [Vaš'a-lî_n_j aslaz*_{i/j} / solen_i korka
 father-P.3-DAT appeal.to Vasja-GEN1 self.GEN1.P.3 / he.GEN1 house
 pukt-em-ez].
 put-NZR-3
Vasja's building himself a new house appeals to the father.

In the example (35), *ač'iz* is an argument of an embedded finite clause. It must be locally bound by the subject of the embedded clause *Vaš'a*, and cannot be covalued with the matrix subject *atajez* 'father'. For the latter purpose the pronominal *so* 'he, that one' is used.

- (35) Ataj-ez-lî_i jara [kâž'ô Vaš'a_j as-lî-z*_{i/j} / so-lî_i korka
 father-3-DAT appeal.to how Vasja self-DAT-3 / he-DAT house
 pukt-e].
 put-PRS.3SG
The father likes how Vasja is building himself / him a new house.

To sum up, the Besermyan *ač'iz* requires a c-commanding antecedent, which is a subject of the clause, and must be locally bound. In the clause it can occupy both coargument and non-coargument positions. However, *ač'iz* also allows split antecedents, which will be discussed in section 5.5.

5.4 The complex reflexive *asôze ač'iz*

5.4.1 Morphological remarks

Besermyan Udmurt also makes use of a complex reflexive *asôze ač'iz*. It consists of two forms of *ač'iz*: one in the oblique case corresponding to the position of the argument in the sentence followed by the nominative form.

As a side remark, I would like to mention that the Udmurt *ač'iz* can be also used as an intensifier (36). The Udmurt *ač'iz* as an intensifier modifying a NP is usually preposed to it (37).

- (36) So ač'-iz vič'ak bakč'a-z-e ur-i-z,
 he self-P.3 all vegetable.garden-P.3-ACC pull.weeds-PRT-3
 no-kin'-no so-lî e-z jurt-ô.
 NEG-who-ADD he-DAT NEG-3 help-SG
He pulled all the weeds in the garden himself, no one helped him.
- (37) Ač'-iz ministr u-g tod-e mar leš't-ânô.
 self-P.3 minister NEG know-PRS.3SG what do-INF
The minister himself does not know what to do.

5.4.2 Syntactic properties

The Udmurt *asôze ač'iz*, just like its Meadow Mari counterpart *škenžəm ške*, is a constituent with special unique features and not an arbitrary juxtaposition of a reflexive and an intensifier. If the order of the elements of *asôze ač'iz* is switched, the meaning of the sentence changes – cf. the contrast between (38a) and (38b). No element can be inserted between the elements of *asôze ač'iz* (38c).

- (38) a. Pet'a asô-z-e ač'-iz gine kwaret-i-z.
 Peter self-3-ACC self-3 only curse-PRT-3
Peter cursed only himself.
- b. Pet'a ač'-iz asô-z-e gine kwaret-i-z.
 Peter self-3 self-3-ACC only curse-PRT-3
Peter himself cursed only himself.
- c. *Pet'a asô-z-e gine ač'-iz kwaret-i-z.
 Peter self-3-ACC only self-3 curse-PRT-3
 Int.: Peter cursed only himself.

The special syntactic status of *asôze ač'iz* is further manifested in the fact that it differs in its syntactic properties from *ač'iz*. The Besermyan Udmurt *asôze ač'iz* does not require a subject antecedent: as shown in (39), a dative object can also serve as an antecedent to the complex reflexive.

- (39) Ataj_i vôn-ez-lô_i fotografi-ôš as-ôz-e ač'-iz_{i/j} vož'ma-t-i-z.
 father brother-P.3-DAT photo-EL self-P.3-ACC self-P.3 show-TR-PRT-3
The father showed to the brother himself on the photo.

Within a simple clause, *asôze ač'iz* can occupy both coargument (40)–(41) and non-coargument positions (42)–(44).

- (40) Ataj-e kwar-et-i-z asô-z-e ač'-iz.
 father-P.1 curse-TR-PRT-3 self-P.3-ACC self-P.3
My father cursed himself.
- (41) Van'a_i as-lô-z ač'-iz_i n'an' baš'-t-i-z.
 Vanja self-DAT-P.3 self-P.3 bread take-SMLF-PRT-3
Vanja bought himself bread.

The use of the complex reflexive is illicit with the postposition *š'arəš'* (42), but is acceptable in non-coargument positions as in (43)–(44).

- (42) Ivan veraš'k-i-z Maša-lô asô-z-e (*ač'-iz) š'arəš'.
 Ivan tell-PRT-3 Masha-DAT self-P.3-ACC self-P.3 about
Ivan told Masha about himself.

- (43) Van'a osk-e Pet'a-lô as-lô-z (ač'-iz) kad'-ik.
 Ivan trust-PRS.3SG Peter self-DAT-P.3 self-P.3 as-EMPH
Ivan trusts Peter like himself.
- (44) Ataj_i ač'-i-z brat-ez-lôš'_j kôšno-z-e as-la-z ač'-iz
 father see-PRT-3 brother-P.3-GEN2 wife-P.3-ACC self-GEN1-P.3 self-P.3
 dor-ôš't-ôz.
 near-EL-P.3
The father saw the brother's wife next to himself.

The Udmurt *asôze ač'iz* allows non-referential antecedents as in (45), which confirms that the relationship with the antecedent can be binding.

- (45) Vič'aköz as-ôz-e ač'iz jarat-e.
 Each self-P.3-ACC self-P.3 like-PRS.3SG
Each one likes himself.

The complex reflexive *asôze ač'iz* must be locally bound. Example (46) shows that as an argument of an embedded infinitival clause, the Udmurt *asôze ač'iz* can be bound only by the subject of this infinitival clause and not by the matrix subject.

- (46) Maša_i kos-i-z N'ina-lô_j [∅_j č'aj leš't-ônô as-lô-z ač'-iz*_{i/j}].
 Masha ask-PRT-3 Nina-DAT PRO tea make-INF self-DAT-P.3 self-P.3
Masha asked Nina to pour herself some tea.

The complex reflexive *asôze ač'iz* does not allow split antecedents.

- (47) *Ivan_i vož'mat-i-z Maša-lô_j asô-z-e-s ač'-iz-es_{i+j} fotografij-ôš'.
 Ivan show-PRT-3 Masha-DAT self-3-ACC-PL self-3 photo-EL
 Int.: Ivan showed to Masha them(selves) on the photo.

Hence the complex reflexive in Besermyan is close in its properties to the prototypical reflexives: it must be bound within a simple clause and does not allow split antecedents. It differs from the semi-reflexive *ač'iz* as the latter can be used in non-coargument positions and allows split antecedents.

The complex reflexive *asôze ač'iz* consists of two forms, the first one gets the case of the argument, the other – *ač'iz* – copies the case of the antecedent (subject) and, hence, needs to get the case licensed. The nearest licenser is the T-node, the feature sharing creates a dependency with the subject and enforces a local dependency.

5.5 Split antecedents

The Besermyan pronoun *ač'iz* allows split antecedents which is more typical for pronominals than for anaphors.

- (48) Pet'a_i vož'mat-i-z fotokartoč'ka-ôš' Van'a-lô_j as-ôz-e-s_{i+j}/*i+.../*j+...
 Peter show-PRT-3 photo-EL Vanja-DAT self-3-ACC-PL
Peter showed Vanja them(selves) in the photo.

Another example is shown in (49), where the plural form *assez* is a complement of a postposition.

- (49) Anaj-ez_i veraš'k-i-z ataj-en-ôz_j as-s-ez_{i+j} š'arôš'.
 mother-3 talk-PRT-3 father-INST-3 self-PL-3 about
The mother talked to the father about them(selves).

How does *ač'iz* participate in licensing reflexivity and avoiding the IDI constraint? Following the analysis proposed for the Meadow Mari *škenže* in section 3.4, I will assume that the possessive suffix agreeing with the antecedent in ϕ -features instantiates a variable. The *ač'-/as-/aš'*-part serves as a Morph and protects the variable by keeping two variable tokens distinct. It cannot move to, or syntactically compose with, the verb since that would require excorporation (from the case and possessive markers), which is forbidden (Baker 1988). This constitutes the main difference with the Dutch *zichzelf* briefly mentioned in section 5.3.2. As discussed in section 1.3.4, in Dutch, *zelf* moves onto the verb forcing any two arguments of a given verb to create a dependency. In Besermyan Udmurt, *ač'-/as-/aš'*-composes with the Skolem function directly (see discussion in section 1.3.2), and the interpretation of *ač'iz* depends on the possessive marker. However, clearly it is not only the possessive suffixes that are responsible for establishing a dependency, because otherwise the possibility of inclusive reference would not be excluded as it happens in Besermyan (50), unlike, for instance, in the English example (51).

- (50) *Kot'kudiz / Pet'a až'e as-ôz-e-s.
 Everyone / Peter see-PRS.3SG self-3-ACC-PL
 Int.: Everyone / Peter saw themselves.

- (51) I like us.

This approach allows us to account for the ability of *ač'iz* to take split antecedents. Similarly to the case of Meadow Mari (section 3.4), I further propose that the subject orientation of *ač'iz* comes from a link to the Force head F in the left periphery. Such a link could stem from the fact that *ač'-/as-/aš'*-denotes a proxy-relation and as such can constrain the domain of values of the second argument – cf. its use as an intensifier in (37). This is quite compatible with its bleached semantics. The Force head F in turn shares features with T (Chomsky 2008), which creates a link to SpecTP. This accounts for the subject-orientation.

The binding domain restrictions of *ač'iz* could be deducible from the properties of the possessive affixes. As discussed in section 5.1.1, the possessive

suffixes in Besermyan seem to have a preference for being locally bound. Another contributing factor could be the inability to skip the local Force as it happens in the infinitival clauses in Meadow Mari.

If the semi-reflexive *ač'iz* is singular, its domain is determined by F. In case we have a plural form *asšazes*, we only have to assume that F restricts its domain to pluralities that are sufficiently salient, in particular those that F bears a relation to, namely pluralities containing the (denotation of the) local subject, and that the formation of pluralities visible to F is limited to arguments in the local domain of F.

5.6 Dative experiencer predicates

As an argument of dative experiencer predicates in an embedded relative clause, the Udmurt semi-reflexive *ač'iz* can be bound long-distantly by the matrix subject. Example (52) illustrates the contrast: in (52a) *ač'iz* is an argument of a dative experiencer verb in the embedded participial clause and is bound by the subject of the matrix clause; in (52b) *ač'iz* is an argument of an agent-theme verb in the embedded participial clause and must be locally bound.

- (52) a. Ivan_i baš'-t-i-z pi-ez-lô_j [as-lô-z_i jara-š']
 Ivan take-SMLF-PRT-3 son-DAT self-DAT-3 appeal.to-PTCP.ACT
 korka.
 house
Ivan bought his son a house which appealed to him.
- b. Ivan_i mên-i-z [as-lô-z*_{i/j} korka baš'-t-ôš'] ad'am_j
 Ivan arrive-PRT-3 self-DAT-3 house take-SMLF-PTCP.ACT man
 dor-ô.
 near-ILL
Ivan came to the man who bought himself a house.

The same effect on binding of *ač'iz* is present if the embedded relative clause is finite.

- (53) Pet'a_i kôšnoja-š'k-i-z nôlmurt-en [kodiz as-lô-z_i jara].
 Peter marry-DETR-PRT-3 girl-INSTR which self-DAT-3 appeal.to
Peter married a girl who appealed to him.

There is a clear preference for the subject of the matrix clause to be the antecedent of *ač'iz* as an argument of a dative experiencer verb in the embedded relative clause.

- (54) Ivan_i todmat-i-z pi-z-e_p [as-lô-z_i/*_j/*_p jara-š']
 Ivan introduce-PRT-3 son-3-ACC self-DAT-3 appeal.to-PTCP.ACT
 nəlmurt-en_j.
 girl-INSTR
Ivan introduced his son to a girl who appealed to him.

If the complex reflexive *asôze ač'iz* is an argument of a dative predicate in an embedded relative clause, the speakers find interpreting this sentence somewhat problematic (see section 5.7).

- (55) ?Ivan_i todmat-i-z pi-z-e_p [as-lô-z ač'-iz_{?p}/_{?i}/*_p
 Ivan introduce-PRT-3 son-3-ACC self-DAT-3 self-
 jara-š'] nəlmurten_j.
 appeal.to-PTCP.ACT girl.with
Ivan introduced his son to a girl who appealed to him.

The Udmurt *ač'iz* shows long-distance binding with the verb *jarany* 'appeal to' which encodes the experiencer with Dative and theme with Nominative:

- (56) Pet'a-lô jara Maša.
 Peter-DAT appeal.to Masha
Masha appeals to Peter.

The account proposed for the context of dative experiencer predicates in Meadow Mari in section 3.5 can be easily carried over to Besermyan Udmurt. Dative experiencer predicates of the *appeal to*-type have an unaccusative derivation and assign inherent case to the experiencer argument VP-internally (Belletti and Rizzi 1988). The theme argument does not get the case and has to move to the subject position (Pesetsky 1995). I assume that *ač'iz* can be bound by the theme once it has moved to the subject position, like it happens in simple clauses. However, in modifying relative clauses the theme does not move into the T-domain, due to the 'weaker' left periphery and hence a weaker T and an absence of the EPP feature. Thus, in relative clauses, *ač'iz* as a dative argument of a dative experiencer verb occupies a relatively high position, plus the position of its preferred antecedent SpecTP, to which *ač'iz* is linked via the Force head F is empty. This creates an exempt configuration, allowing *ač'iz* to search for the antecedents outside its binding domain.

5.7 Methodological remarks

The data have been obtained through questionnaires that were completed by trained linguists during work sessions with the speakers of Besermyan in the village of Shamardan, Udmurt Republic. This method of data collection limited the number of examples obtained. Sometimes, the judgements provided were quite contradictory.

For the example on the use of a complex reflexive *asəze ač'iz* as an argument of a dative experiencer verb in an embedded relative clause, one out of three speakers considered the sentence illicit, two said it was okay; and of those two, one said *asəze ač'iz* is bound by the girl, and not Ivan (that would be the expected pattern based on the evidence from Meadow Mari), whilst the other stated that it is bound by Ivan, and not by the girl.

- (57) [?]Ivan_i todmat-i-z pi-z-e_p [as-lə-z ač'-iz_{p/?i/*p}
 Ivan introduce-PRT-3 son-3-ACC self-DAT-3 self-3
 jara-š'] nəlmurten_j.
 appeal.to-PTCP.ACT girl.with
Ivan introduced his son to a girl who appealed to him. =(55)

A possible source for the discrepancy could be the way the complex reflexive *asəze ač'iz* establishes a dependency. As proposed in section 5.4.2, the second part of the complex reflexive *ač'iz* copies the case of the antecedent (subject) and, hence, needs to get the case licensed. The nearest licenser usually is the T-node, the feature sharing creates a dependency with the subject and enforces a dependency. However, in case of the relative clauses with dative experiencer predicates, the T-node is weak and lacking an EPP feature, hence the theme argument which usually moves to the SpecTP position stays inside the VP leaving SpecTP empty. This prevents enforcing a dependency.

In the transitive sentences with a referential antecedent like *Ivan fooled his wife* or the one in (58), the discourse reading for the possessive suffix was judged as illicit by four speakers.

- (58) Ivan_i ač'-e kəšno-z_{i/*k}-e.
 Ivan see-PRS.3SG wife-3-ACC
Ivan sees his wife. =(3)

If a potential antecedent is non-referential, there is a split in judgement. In case of *kot'kudiz* 'everyone' one speaker out of three said that only discourse interpretation is available (59a). Two others deemed that it must be locally bound (59b).

- (59) a. Kot'kudiz_i ač'-e kəšno-z_{k/*i}-e.
 everyone see-PRS.3SG wife-P.3-ACC
Everyone sees his wife.
 b. Kot'kudiz_i ač'-e kəšno-z_{i/*k}-e.
 everyone see-PRS.3SG wife-P.3-ACC
Everyone sees his wife.

Given that this discrepancy in judgements is not present in a more neutral context of discussing a car, as in examples (4) and (6)–(8) discussed in section 5.1.1, one way of explaining this effect would be to say that it has to do with the

difference in properties between inalienable and alienable possession. Another issue that could be at stake here is the reanalysis of possessive markers in Accusative as the markers of definiteness in Besermyan Udmurt, especially in the case of contrastive topic (for further details see Toldova and Serdobolskaya (2012)).

As for examples (58)–(59) and (5), the possessive suffixes in Besermyan Udmurt could be expected to allow coreference if binding is not available. There is a more general phenomenon cross-linguistically that certain elements (e.g. the Japanese *kare*) cannot be bound by a quantifier but do allow sloppy readings in VP ellipsis (see also Kartono (2013) for a discussion of the Indonesian *dirinya*).

5.8 Conclusion

In many respects reflexive strategies in Besermyan Udmurt are similar to those in other languages under discussion. There are, however, a few notable differences. The detransitivizing suffix *-iš'k-* has a broader range of uses, for instance, it can express reciprocity.

In the complex reflexive *asəze ač'iz*, both parts agree with the antecedent via the possessive suffixes, much like in Izhma Komi-Zyrian. I claim that the way of establishing a dependency for the Besermyan complex reflexive is by means of feature sharing via T. In contrast, for the Meadow Mari *škenžəm ške* I suggest that *ške* moves onto the verb enforcing reflexivity. The possessive suffixes in Besermyan behave differently which is reflected in the binding constraints of *ač'iz*, namely it must be locally bound.

CHAPTER 6

Shoksha Erzya

6.1 Background

Erzya [myv] is a Uralic language of Russia, which together with Moksha [mdf] belongs to the Mordvin subgroup. According to the Ethnologue (Lewis et al. 2013) Erzya (together with Moksha) is spoken by 431,700 people in the Russian Federation (2010 census)¹. Erzya is spoken in the Volga region, primarily in the north and east of the Republic of Mordovia (the capital is Saransk, 650 km south-east of Moscow, in the European part of Russia) as well as in the neighbouring provinces of Nizhny Novgorod, Ulynovsk, Penza, Orenburg, and Samara; and in the republics of Chuvashia, Tatarstan, and Bashkortostan (for detailed discussion see Rueter (2010)).

The variety reported here is spoken in the village of Shoksha in the north-west of the republic of Mordovia (about 400 km south-east from Moscow). The data were compiled through questionnaires during fieldtrips of the Lomonosov Moscow State University in summers of 2006, 2007 and 2013². The status of Shoksha is a matter of discussion: it is generally considered a western Erzya dialect that has been exposed to extensive Moksha influence (see, for instance, Kuznetsova (2012a)), however some researchers point out that “there are certain

¹Although closely related, the Erzya and Moksha languages are characterized by low mutual intelligibility (Kol’adenkov 1954), the speakers of Erzya and Moksha perceive themselves as one Mordvin ethnicity (Feoktistov 1966).

²I would like to thank Vladimir Ivanov and Yevgenij Fed’ko for helping me with obtaining the data.

kird'-i-mim, tancevat' kuč-i-mim.
 keep-PRT-1SG.O.3SG.S dance send-PRT-1SG.O.3SG.S
My mother gave birth to me, put (me) on the oven. (She) kept (me there) for two hours and sent (me) to dance. (FUCorpora)

Erzya does not have a dedicated case for the direct object and displays differential object marking with the choice between the genitive of the definite declension (4a) and the unmarked form (4b).

- (4) a. Brat-s mor-y-ze mory-t'.
 brother-DEF.NOM sing-PRT-3SG.O.3SG.S song-DEF.GEN
The brother sang the song.
- b. Brat-s mora-s' more.
 brother-DEF.NOM sing-PRT.3SG song
The brother sang a song.
- c. *Brat-s mor-y-ze more.
 brother-DEF.NOM sing-PRT-3SG.O.3SG.S song
 Int.: The brother sang a song.
 (Toldova and Serdobolskaya 2012: (84))

Further, as Toldova and Serdobolskaya (2012) point out, in Shoksha Erzya there is another option for marking the direct object – it is a grammaticalized locative form *-tende / -t'ende* encoding dative, illative and ablative singular of the definite declension and *-(t'n'i)n'ende* encoding illative and ablative plural of the definite declension. In certain cases the direct object can also be encoded with the definite elative marker *-t'e-st(e)* in singular and *(t)nin'e-st* in plural (Natalia Serdobolskaya, p. c.).

In most cases the choice of agreement type correlates with the type of marking on the direct object: subject-object agreement on the verb requires genitive marking on the noun – cf. (4a) and (4c), subject agreement co-occurs with the unmarked form and the locative form (4b), (5) (Toldova and Serdobolskaya 2012). However, there is no one-to-one correspondence between the choice of verbal agreement and the direct object marking: according to Toldova and Serdobolskaya (2012), in the Shoksha dialect genitive marking on the direct object can occur with subject agreement as well (6).

- (5) Ava-m aj-kaje-s' lovca / lovcu-t'e-nde kružka-v no
 mother-1SG IPF-pour-PRT.3SG milk / milk-DEF-ABL mug-LAT but
 ez'-i-ze kaja-k pes.
 NEG-PRT-3SG.O.3SG.S pour-CN in.full
The mother poured (some) milk into the mug but not in full.
 (Toldova and Serdobolskaya 2012: (81))
- (6) Mon jomaft-y-n' sond'e kiniška-tn'in'e.
 I lose-PRT-1SG he.GEN.3SG books-PL.DEF.GEN
I lost his books. (Toldova and Serdobolskaya 2012: (83))

Furthermore, Toldova and Serdobolskaya (2012) argue that the choice of DOM in Shoksha Erzya depends on the interplay of the referential status of the direct object, the information structure of the sentence and the aspectual characteristics of the predicate. Specific NPs are mostly encoded with genitive and subject-object agreement on the verb, non-specific NPs – with the unmarked form and subject agreement. Non-referential NPs are encoded depending on the information structure of the phrase: genitive and the subject-object agreement are preferred in the topic, while in the focus the unmarked form or the definite locative form with subject agreement are to be expected. The combination of genitive and subject agreement becomes an option if the direct object belongs to the topic, while the verb is in focus.

There are two strategies used in Erzya for encoding reflexivity – a verbal and a nominal one. One question that merits mentioning is if there is subject-object agreement in Erzya, and it facilitates object drop, are locally bound pronominals possible? And if not, why not? Example (7) shows that the Erzya 3rd person pronoun *son* cannot be locally bound.

- (7) Pet'e-s'_i aj-n'ij^h-sa-za loman-t'_j kona-s'_j
 Peter-DEF.NOM IPF-see-PRS-3SG.O.3SG.S man-DEF.GEN who-DEF.NOM
 aj-risova-sa-za son'-d'e_{i/*j} bloknot-s.
 IPF-draw-PRS-3SG.O.3SG.S he-GEN notebook-ILL
*Peter sees the man who is drawing him / *himself in the notebook.*

Why is Erzya not like Khanty? As discussed in fn. 4 (p. 134), pronominals in Erzya can be used as intensifiers. I assume that the difference lies in the way object agreement operates, but the exploration of the issue has to be left for further research.

6.3 The verbal reflexive strategy

6.3.1 Description

One way of encoding reflexivity is by omitting the object and only having subject agreement. This strategy is limited to a subclass of agent-theme verbs. As discussed in section 1.3.2, these verb forms reflect the operation of valence reduction and bundling in the sense of Reinhart and Siloni (2005).

- (8) a. Son kišt-y-ze mašyna-t'.
 he wash-PST-3SG.O.3SG.S car-DEF.GEN
 He washed the car.
 b. Son kišta-s'.
 he wash-PST.3SG
 He washed (himself).

There is another detransitivizing strategy in Erzya – the suffix *-v-*, which marks valence-increasing operations if the verb carries subject-object agreement and valence-decreasing operations if the verb only agrees with the subject. In example (9) the sentence (9a) shows that the verb *sokams* ‘plough’ is transitive. In (9b), adding the suffix *-v-* in combination with subject agreement creates a passive form, while in (9c) the same verb form derived with the suffix *-v-* but accompanied by subject-object agreement is causative.

- (9) a. {*LC: I will buy your sons a horse,*}
 i epet’ syn’ karm-it’ soka-ma mody-ŋgi-t’...
 and again they become-PRS.3PL plough-NZR land-DIM-DEF.GEN
and they will plough the land again... (FUCorpora)
- b. Paks’a aj-soka-v-e.
 land IPF-plough-VAL-PRS.3SG
This land is ploughed. (Letuchiy and Kolomatsky 2012: (25))
- c. Son aj-soka-v-sa-za paks’e-t’.
 he IPF-plough-VAL-PRS-3SG.O.3SG.S land-DEF.GEN
He orders to plough the land. (Letuchiy and Kolomatsky 2012: (26))

According to our data, *-v-* is not used for expressing reflexivity. The rare use of *-v-* in the reflexive meaning is also mentioned by Salo (2006) and Geniušiene (1987). As the latter points out, “the decausative function, along with autocausative³ and passive, is the principal function of the Mordvin RM *-v-*” (Geniušiene 1987: 323).

6.3.2 Analysis

For the verbs that allow expressing reflexivity by omitting the object and taking subject agreement, I propose that just as in the case of the other languages discussed this reflects an operation on argument structure in line with Reinhart and Siloni (2005). Hence, there exist two lexical entries – a transitive verb and an intransitive one – related by the lexical operation. For instance, for the verb *kištams* ‘wash’ in (8) it is *kištams*_{TR} (8a) and *kištams*_{INTR} (8b), much like the English *wash*; or the verb *l’ekšn’ims*_{TR} ‘bath’ as in example (10a) and *l’ekšn’ims*_{INTR} as in (10b). The latter are derived from their transitive counterparts in the lexicon through the bundling operation (Reinhart and Siloni 2005).

- (10) a. L’ošā davaj katka-t’ l’e-kšn’i-sy-n’ik...
 Lyosha let.us cat-DEF.GEN bath-ITER-PRS-3.O.1PL.S
Lyosha, let’s wash the cat... (FUCorpora)

³Autocausative is a detransitivizing operation involving elimination of the direct object. The only remaining argument “retains its hyper-role of Semantic Ssubject but changes it from Agent to Actor”. The resulting verb usually denotes “change of location or motion which the (human) referent causes by his own activity” (Geniušiene 1987: 87).

- b. Potom mon t'i-i-n' rastvor i l'e-kšn'-e epet'
 afterwards I make-PRT-1SG bath and bath-ITER-PRS.3SG again
 t'ora-t' mar^hta. (FUCorpora)
 boy-DEF.GEN with
After that I made a bath and he bathed together with my son.

As discussed in section 1.3.2, the bundling operation reduces the internal argument of the verb and creates a composite θ -role. Note that in order to capture the contrast with the other languages discussed, we would have to assume that in Erzya reduction eliminates the object Case. Whether or not no internal argument is projected at all – as in the case of the English *wash* – or there is a syntactic argument, but with a null-realization, still has to be checked. It could be done with the help of object comparison test of Zec (1985) (see discussion in section 1.3.2), given that a verb with subject agreement can take the unmarked form as a complement, and object comparison test does not work for language with special marking on the direct object. Another option for proving that *kištams* and *l'ekšn'ams* can be syntactically intransitive when carrying subject agreement would be the proxy reading context, as discussed for Meadow Mari (section 3.3.1). However, the relevant data are not yet available, hence resolving the issue awaits further research.

6.4 The nominal strategy

6.4.1 Morphological remarks

The nominal strategy in Erzya is represented by a complex reflexive *es' pr'et'* /self head.DEF.GEN/ 'self's head' and a simpler pronoun *es'* 'self', which is used in postpositional phrases and in its dative form *es't'ende* 'self.DAT.3SG' in the position of a dative argument.

The reflexive pronoun in Erzya *es' pr'et'* consists of two parts: *es'*, a cognate of (semi)reflexive pronouns in other Finno-Ugric languages (Majtinskaja 1979), and the word *pr'a* 'head' in the relevant case form – cf. table 6.1 (for various uses of *pr'a* 'head' see Turgaeva-Smirennikova (1972)). In literary Erzya, *es'* functions as a possessive reflexive (Kol'adenkov and Zavodova 1962; Serebrennikov et al. 1993), this type of use is however obsolete in the Shoksha dialect (11a). In possessive contexts, Shoksha Erzya employs bound pronominal forms of the definite declension⁴ (11b) and, thus, contrasts with Meadow Mari, Komi-Zyrian and Besermyan Udmurt.

⁴This type of pronominal declension in Erzya is also often called "emphatic" in the literature – cf. (Kol'adenkov and Zavodova 1962: 229). Its forms are derived by adding to the pronoun the marker *-s'* (glossed as INTF hereafter). The resulting forms are also used as intensifiers in Erzya: *mon-s'* 'I myself', *ton-s'* 'you(sg) yourself', *son-s'* 'he himself', *min'-s'* 'we ourselves', *tin'-s'* 'you(pl) yourselves', *syn'-s'* 'they themselves'.

Form	Number	
	SG	PL
DEF.GEN	es' pr'e-t'	es' pr'e-t'n'in'
DEF.EL	es' pr'e-t'e-st	–
DAT	es' pr'e-t'e	–

Table 6.1: Forms of *es' pr'et'*

- (11) a. *Son aj-n'ij^h-sa-za es' brat-t.
 he IPF-see-PRS-3SG.O.3SG.S self brother-DEF.GEN
 Int.: He sees his brother.
- b. Son aj-n'ij^h-sa-za sons'inde brat-t.
 he IPF-see-PRS-3SG.O.3SG.S he.INTF.GEN brother-DEF.GEN
He sees his brother. (Ivanov and Fedko 2006a)

The form of the complex reflexive *es' pr'et'* is frozen. In every context where *es' pr'et'* can be used the speakers allow replacing it with *sons'inde pr'et'* where the same meaning is retained – cf. (12a) and (12b), but mention that the latter case is likelier to be interpreted straightforwardly as ‘his head’. In spontaneous speech *sons'inde pr'et'* is practically never used as an argument reflexive (Ivanov and Fedko 2006b).

- (12) a. Son kišt-y-ze es' pr'e-t'.
 he wash-PST-3SG.O.3SG.S self head-DEF.GEN
He washed himself. (Ivanov and Fedko 2006b: (1))
- b. Son kišt-y-ze sons'inde pr'e-t'.
 he wash-PST-3SG.O.3SG.S he.INTF.GEN head-DEF.GEN
He washed himself / his head. (Ivanov and Fedko 2006b: (2))

Erzya *es' pr'et'* is not marked for person. Its paradigm (as shown in table 6.1) consists of three forms in the singular: genitive and elative of the definite declension (the direct object forms) and a dative form *es' pr'et'e* (*pr'et'e* is the dative form of the indefinite declension for *pr'a* ‘head’); and a plural form *es' pr'et'n'in'*. The dative plural form could be homophonous to the singular form given that, in Erzya, indefinite declension the plural marker *-t/-t'* is overt only in the Nominative (Kol'adenkov and Zavodova 1962; Kuznetsova 2012a). As example (13) shows, the plural dative form of the definite declension is not in use.

- (13) Sin' rama-st' *es' pr'e-tni-n'e / es'-t'e-st kše.
 they buy-PRT.3PL self head-PL.DEF-DAT / self-DAT-P.3PL bread
They bought themselves bread.

The use of the form *es' pr'et'* in the genitive of the definite declension in the direct object position usually co-occurs with the presence of subject-object agreement on the verb. That is the situation in all examples I have, as well as in FUCorpora. Note, however, that in Shoksha Erzya, the presence of the definite genitive marking on the direct object does not obligatorily trigger subject-object agreement on the verb – cf. (6) (Toldova and Serdobolskaya 2012). The relative of the definite declension form *es' pr'e-t'e-st* is obligatorily used with verbs in subject agreement. The dative form *es' pr'et'e* never occupies a direct object position and hence does not play a role in the choice of agreement on the verb.

The pronoun *es'* comes in two flavours: the bare form *es'* and a dative form which takes possessive markers, for instance *es'-t'e-nde* ‘self-DAT-3SG’ (cf. the full paradigm for Dative in table 6.2). *Es'* in contrast to *es' pr'et'* cannot express reflexivity in the object position of a two place predicate, and hence does not constitute a primary reflexive strategy in the sense of Faltz (1985). However, the pronoun *es'* in its dative form *es't'ende* can be covalued with the subject of the clause in the dative object position (14a), where it is more common than the dative form *es' pr'et'e*. Although in many cases *es'* and *es' pr'et'e* are mutually interchangeable (14), the speakers note that the latter can have additional meaning ‘to do something for oneself which turns out to be troublesome’.

- (14) a. Son rama-s' es'-t'e-nde kše.
 he buy-PRT.3SG self-DAT-P.3SG bread
 He bought bread for himself.
- b. [?]Son rama-s' es' pr'e-t'e kše.
 he buy-PRT.3SG self head-DAT bread
 He bought bread for himself (and that brought trouble onto his head).

The dative forms of *es'* in the Shoksha dialect constitute the only morphological hint of its common roots with the Meadow Mari *ške*, Komi-Zyrian *ač'ys* and Beserman Udmurt *ač'iz*. In literary Erzya *es'*, just like its counterpart

Person	Number	
	SG	PL
1	es'-t'e-n'	es'-t'e-n'ik
2	es'-t'e-t'	es'-t'e-n'k
3	es'-t'e-nde	es'-t'e-nst

Table 6.2: The paradigm of *es'* in Dative (-t'e-)
 (Ivanov and Fedko 2006b)

ške in Meadow Mari, can be used as a possessive reflexive and has a fully-fledged paradigm of case forms derived following the pattern *es'*-CASE-POSS (Kol'adenkov and Zavodova 1962). In the Shoksha dialect *es'*, as mentioned above, lost its ability to be used as a possessive reflexive, and the dative forms are the only oblique forms that remained. With the exception of a genitive form which is absent, the rest of the case system is substituted by combinations of the bare form *es'* with various postpositions.

Neither the bare form *es'*, nor the dative form *es't'ende* are ever used in the direct object position and hence do not influence the choice of agreement on the verb.

6.4.2 Syntactic properties of *es'*

The bare form *es'* is used in Shoksha Erzya only in combination with *pr'et'* or with postpositions. In the latter case, the postposition usually bears a possessive suffix (15). It cannot fill the position of a direct object.

- (15) Son tokad-i-ze tar'elka-t es' vaks-ste-nde.
 he touch-PRT-3SG.O.3SG.S plate-DEF.GEN self near-EL-P.3SG
He moved the plate away from himself. (Ivanov and Fedko 2006a)

However, the dative form of *es'* that also necessarily contains a possessive marker (c.f. table 6.2) can occupy the dative argument positions (16)⁵ denoting the beneficiary.

- (16) Maše-s' p'id'-i-ze s'ukur-t es'-t'e-nde.
 Maša-DEF.NOM bake-PRT-3SG.O.3SG.S pie-DEF.GEN self-DAT-3SG
Masha baked a pie for herself.

Es' must be bound in the local domain – examples (17)–(19) show that as an argument of the infinitival (17), participial (18) or finite (19) embedded clause it cannot take the matrix subject as its antecedent.

- (17) Pet'e-s'_i mer-s' Vas'e-t'e_j [∅_j kaja-ms es'-t'e-nde_{*i/j}
 Peter-DEF.NOM say-PRT.3SG Vasja-DAT PRO pour-INF self-DAT-3SG
 čaj].
 tea
Peter asked Vasja to pour tea for himself / him.
 (Ivanov and Fedko 2006a)

- (18) Son_i at sot-sa-za loman-t'_j [∅_j kort-y
 he not know-PRS-3SG.O.3SG.S person-DEF.GEN PRO talk-PTCP.ACT
 [es' mar^htu-nda]_j / mar^htu-nda_i].
 self together-P.3SG / together-P.3SG
He doesn't know the man who is talking about himself / him.
 (Ivanov and Fedko 2006a)

⁵The dative form *es't'ende* can also modify dative arguments serving as an intensifier.

- (19) Pet'es'_i jofta-s' [što Maše-s'_j p'id'-i-ze
 Peter say-PRT.3SG that Maša-DEF.NOM bake-PRT-3SG.O.3SG.S
 s'ukur-t es'-t'e-nde*_{i/j}].
 pie-DEF.GEN self-DAT-P.3SG
Peter said that Masha baked a pie for herself.

If *es'* is a complement of a postposition that can be stressed (both locative and non-locative), then it can be omitted without any change for the interpretation (20).

- (20) Ava-s' oza-f-t-y-ze ej^hkakš-t (es')
 mother-DEF.NOM sit-VAL-TR-PRT-3SG.O.3SG.S child-DEF.GEN self
 vaks-u-zu-nde.
 near-INESS-3SG-ABL
The mother put the child next to herself. (Ivanov and Fedko 2006a)

In Erzya, similarly to Meadow Mari (see discussion in section 3.2.2), if *es'* is omitted in a postpositional phrase, the possessive suffix on the postposition can pick an antecedent freely, as well as refer to someone not mentioned in the sentence but activated to the hearer from the previous discourse or the situation. For instance, in (18) the postpositional phrase *es' mar^htu-nda* must be locally bound. However, if *es'* is dropped, the postposition in combination with the 3rd person possessive suffix *mar^htu-nda* /together-P.3SG/ can be covalued with the matrix subject. In (21), the possessive suffix on the postposition *mar^htu-nda* refers to someone mentioned in the previous text.

- (21) {LC: He was a driver.}
 Mar^htu-nda drug St'e^hpan-s Xed'uše-n', t'in'e-s
 together-P.3SG friend Stepan-DEF.NOM Fedusha-GEN HEZ-DEF.NOM
 vejse robota-s' vejse er'e-s'-kak.
 together work-PRT.3SG together live-PRT.3SG-ADD
With him a friend Stepan Fedushin worked together and even lived together. (FUCorpora)

The next subsection provides an overview of the syntactic properties of *es'* in combination with the word *pr'a* 'head'.

6.4.3 Syntactic properties of *es' pr'et'*

The relationship between Erzya *es' pr'et'* and its antecedent is one of binding, and not coreference, which is illustrated in example (22) with a non-referential antecedent.

- (22) Každyj-s' es' pr'e-t' rang-i-ze.
 everyone-DEF.NOM self head-DEF.GEN cry-PRT-3SG.O.3SG.S
Everyone swore (at) himself.

The Erzya *es' pr'et'* requires a c-commanding antecedent, but the antecedent does not need to be the subject of the clause. In (23), both the subject of the clause and the dative object can be the antecedents of *es' pr'et'*. In that respect *es' pr'et'* differs from the complex reflexives in Meadow Mari and Izhma Komi-Zyrian and behaves similarly to the complex reflexives in English and Dutch.

- (23) Pet'e-s'_i n'evft'-i-ze Vas'e-t'e_j es' pr'e-t'_{i/j}
 Peter-DEF.NOM show-PRT-3SG.O.3SG.S Vasja-DAT self head-DEF.GEN
 fotografija naŋg-sa.
 photo top-INESS
Peter showed to Vasja himself / him on the photo.

However, if *es' pr'et'* is inside a postpositional phrase, it can only be bound by the subject of the clause and not by a c-commanding dative object (24a). For the latter two coarguments to be covalued, a pronominal should be used (24b).

- (24) a. Maše-s'_i jofn-i-s' Ivan-te_j es' pr'e-t'_{i/*j}
 Masha-DEF.NOM tell-PRT-3SG Ivan-DAT self head-DEF.GEN
 kor'a-va.
 according-PROL
Masha talked to Ivan about herself.
 b. Ava-m jofn-i-s' min'e-n'ik min'ik kor'a-va.
 Mother-1SG tell-PRT-3SG we.DAT-1PL we.GEN.1PL according-PROL
The mother talked to us about us.

The Erzya *es' pr'et'* must be locally bound. Examples (25) – (27) show its inability to be bound by the matrix subject in the embedded infinitival, participial, and nominalized clauses respectively.

- (25) Koz'ejka-s'_i mer-s' Ivan-te_j [Ø_j požal'et' es'
 wife-DEF.NOM say-PRT.3SG Ivan-DAT PRO have.pity.on self
 pr'e-t'_{*i/j} / son'd'e_i].
 head-DEF.GEN / he.GEN.3SG
The wife asked Ivan to have pity on himself / her.
 (Ivanov and Fedko 2006a)
- (26) Vas'e-s'_i a_jg-i-ze t'ory-ŋgi-t'_j [Ø_j
 Vasja-DEF.NOM push-PRT-3SG.O.3SG.S boy-DIM-DEF.GEN PRO
 pufty-z' es' pr'e-t'_{*i/j} / son'd'e_i].
 wake-PTCP self head-DEF.GEN / he.GEN.3SG
Vasja pushed the boy, who woke himself / him up.
 (Ivanov and Fedko 2006a)

- (27) Pet'e-s'_i lez-s' sus'eda-t'e_j [r'isova-ma es'
 Peter-DEF.NOM help-PRT.3SG neighbour-DAT draw-NZR self
 pr'e-t'*_{i/j} / son'd'e_i].
 head-DEF.GEN / he.GEN.3SG
Peter helped (his) neighbour drawing himself / him.
 (Ivanov and Fedko 2006a)

The reflexive *es' pr'et'* also cannot be bound across a finite clause boundary.

- (28) Maše-s'_i arse [što Pet'e-s'_j es' pr'e-t'e-st*_{i/j}
 Masha-DEF.NOM think.PRS.3SG that Peter-DEF.NOM self head-DEF-EL
 aj-range].
 IPF-cry.PRS.3SG
Masha thinks that Peter swears at himself.

Inside the clause *es' pr'et'* can only occupy a coargument position – cf. the use of *es' pr'et'* in a direct (29) and indirect (30) object position (limited due to the additional negative repercussions meaning (30b)). It can also be used in the position of an oblique postpositional object with the postpositions like *kor'ava* 'about' (24a) or *naŋga* 'about' (31). *Es' pr'et'* is not used in non-coargument positions.

- (29) Son večk-sa-za ans'ak es' pr'e-t'.
 he love-PRS-3SG.O.3SG.S only self head-DEF.GEN
He loves only himself.
- (30) a. Son t'ij-s' at jon es' pr'e-t'e.
 he do-PRT.3SG not good self head-DAT
He did harm to himself. (Ivanov and Fedko 2006a)
- b. ?Maše-s' p'id'-i-ze s'ukur-t es' pr'e-t'e.
 Maša-DEF.NOM bake-PRT-3SG.O.3SG.S pie-DEF.GEN self head-DAT
Masha baked a pie for herself.
- (31) Pete-s'_i jofn-i-s' minenik es' pre-t'_i naŋ-ga.
 Peter-DEF.NOM tell-PRT-3SG we.DAT self head-DEF.GEN top-PROL
Peter told us about himself.

There are two situations in which the syntactic behaviour of *es'* and *es' pr'et'* diverges from the description above, namely the split antecedents context and relative clauses with dative experiencer verbs. The next sections are devoted to their analysis.

6.5 Split antecedents

6.5.1 The puzzle

The Erzya *es' pr'et'* requires a local antecedent in case its features match with those of the antecedent. However, if the anaphor is plural and the antecedent is singular, but there is another argument in the sentence, split antecedents are possible (see section 1.4.2 for discussion). As shown in (32), the plural form *es' pr'et'n'in'* requires a plural antecedent. Given that both coarguments are singular, the split antecedent interpretation ensues.

- (32) Pet'e-s'_i n'eft'-i-ze Vas'e-t'e_j es' pr'e-t'n'in'_{i+j}
 Peter-DEF.NOM show-PRT-3SG.O.3SG.S Vasja-DAT self head-PL.DEF.GEN
 fotografija naŋg-sa.
 photo top-INESS
Peter showed Vasja them(selves) on a photo.

However, *es' pr'et'* does not allow inclusive reference readings – cf. (33):

- (33) *Ivan večk-sy-nde es' pr'e-t'n'in'.
 Ivan love-PRS-3PL.O.3SG.S self head-PL.DEF.GEN
 Int.: Ivan loves themselves.

Unlike its counterpart in Meadow Mari, *es' pr'et'* can get a split antecedent reading across an infinitival clause boundary, which is illustrated in (34): *es' pr'et'n'in'* is an argument of an embedded infinitival clause, and it refers back to the combination of the subject of the infinitival clause and the matrix subject. It is an important question whether both components of the split antecedent can be non-local, or whether one of the components must be local. In all the examples I have, one component of the split antecedent is local, hence I will assume for now that this is always the case.

- (34) Koz'ejka-s'_i poprosila Ivan-t_j [∅_j užel'a-ms es'
 wife-DEF.NOM asked Ivan-DEF.NOM PRO have.pity-INF self
 pr'e-t'n'in'_{i+j/*k}].
 head-PL.DEF.GEN
The wife asked Ivan to have pity (for) themselves.

Unfortunately, I lack the necessary data on whether or not the dative and the bare form of *es'* allow split antecedents. My expectation would be that the dative form *es't'ende* does allow it. Much like its Meadow Mari counterpart, in the case of a number feature mismatch with the only available antecedent, *es't'ende* allows an interpretation 'X and some associated set of relatives'.

- (35) Son_i rama-s' es'-t'e-nst_{i+kin/*i+k} kše.
 he buy-PRT.3SG self-DAT-3PL bread
He bought bread for themselves (himself and his family).

Let us summarize what we know by now. *Es' pr'et'* must be locally bound, it allows both subject and non-subject antecedents (the latter only if *es' pr'et'* itself is not an argument of a PostP). The plural form *es' pr'et'n'in'* does not allow inclusive reference, but allows split antecedents (also across an infinitival clause boundary), namely the situation when the antecedent may be a singular under the condition that another (argument) DP is present in the sentence to create a plural. Thus, the plural form *es' pr'et'n'in'* does not enforce reflexivity.

Es' must be locally bound, is used only in PostPs (in this case the presence of a possessive suffix on the postposition is required) and as a dative object (a possessive suffix also present). It allows *i+kin* interpretation. It can be used as an intensifier (36) (although only in the dative, and the examples I have are all for non-adnominal uses).

- (36) Son'e-nde es'-t'e-nde aj-er'av-e.
 he.DAT-P.3SG self-DAT-P.3SG IPF-be.necessary-PRS.3SG
It is necessary to him himself. (He needs it himself.) (Ivanov and Fedko 2006a)

The second part of this section is devoted to the conclusions we can draw about *es' pr'et'* from this quirk in its behaviour.

6.5.2 Analysis

The constraints on the syntactic behaviour of *es' pr'et'* are much more rigid than, for instance, those of the Meadow Mari *škenže* and more similar to those of *škenžəm ške*, except for the possibility of split antecedents. How does *es' pr'et'* participate in licensing reflexivity, thus preventing the effect of IDI? The complex *es' pr'et'* consists of two parts each of which is a good candidate for being Morph. *Es'*, by virtue of originating from a word meaning 'soul, spirit', is a relational noun which got semantically bleached to the point of not only losing its lexical meaning (like *ške* in Meadow Mari) but also the possibility to be used as the sole argument of an expression (unlike *ške* which retained this ability). The word *pr'a*, also a relational noun, seems a good option for Morph by analogy with other body-part reflexives. Let us next determine what could serve as the variable to be protected. I see two options: *es'* and a number feature on *pr'a*.

If we think about the dative form *es't'ende* as well as *es'* in postpositional phrases, it becomes clear that here *es'* might not be the best option. In both these cases, as well as in the case of the other Finno-Ugric counterparts of *es'*, the clear candidate for a variable is the possessive suffix. I suggest that in the case of *es' pr'et'* and in the case of *es'* the interpretation follows different paths. In Erzya *es' pr'et'* the word *pr'a* serves as Morph, and *es'* instantiates a variable. For *es'* in PostPs and in dative *es'* itself serves a Morph, and a possessive marker constitutes a variable to be protected.

Es'

Given the structural and functional similarities between *es't'ende* and the Meadow Mari *škenže*, I will extend the analysis proposed for the latter (see section 3.4.2) to the former. Due to excorporation issues (Baker 1988), *es'* does not enforce reflexivity. Hence, as discussed in section 1.3.2, *es'* composes with the Skolem function directly and in combination with a possessive suffix denotes a function mapping every entity *x* to one of its proxies in *es'(x)*. A proxy relation defined by *es'* restricts the domain of interpretation for *x* by introducing a set of alternatives. Note that similarly to its counterparts in the Uralic languages under investigation, *es'* in the dative form can be used as an intensifier, as in (37). Here the dative form *es't'en'* highlights that it is the family members who are supposed to get the death notice first as opposed to alternatives like the enlistment office.

- (37) {LC: And he died for the motherland on August 19. Stepan said it was announced (lit. written) in Temnikovo in the enlistment office.}
 A mon'-s' ... a es'-t'e-n', što tarvad-y-z'
 but I.GEN-INTF ... but self-DAT-P.1SG that kill-PRT-3.O.3PL.S
 ez' sa-kšnu-k-kak.
 NEG.PRT.3SG come-ITER-CN-ADD
But me... but to myself the notice that he was killed didn't come.
 (FUCorpora)

If this contextual role of *es'* is grammaticalized it can be encoded in the left periphery (Bianchi 2001; Sigurdsson 2004b, 2011; Delfitto and Fiorin 2011). Following my analysis of Meadow Mari, I assume that the relevant projection is some Force head F (Delfitto and Fiorin 2011). Thus, when *es'* is in singular, its domain is determined by F, which in turn shares features with T (Chomsky 2008), which would predict the subject-orientation and the locality requirement. Where we have a plural form, for instance, *es'-t'e-nst* /self-DAT-P.3PL/, we only have to assume that F restricts its domain to pluralities that are sufficiently salient, in particular those that F bears a relation to, namely pluralities containing the (denotation of the) local subject.

Es' pr'et' Suppose *es' pr'et'* is a grammatical innovation in Erzya. This idea can be supported by the absence of a fully-fledged paradigm, as well as by the fact that, in Dative, *es' pr'et'* retains its lexical meaning 'one's head'. That might be the reason for its limited use in Dative and the additional meaning it has – 'to do something for oneself which turns out to be troublesome' – is identical to the meaning of Russian *na svoju golovu* 'on one's head be it'.

The rigid constraints on the observed behaviour of *es' pr'et'* hint that there might be enforcing involved, in the specific implementation I adopt, by Morph covertly moving onto the verb. That is why *es' pr'et'* in the coargument do-

main (unlike *es'* and the complex reflexive in Meadow Mari) allows non-subject antecedents. Once *pr'et'* moves, *es'* must be covalued with its coargument.

However, there is a context in which the covert movement of *pr'et'* is blocked, namely in the postpositional phrase. As a complement of the postpositions *nayga* / *kor'ava* 'about' (24) *es' pr'et'* can be bound only by the subject. The postposition blocks the movement of *pr'et'* onto the verb. In this case *es' pr'et'* does not enforce reflexivity and is interpreted via the left periphery the same way as standalone *es'*.

This leaves the question of how to account for the split antecedent option. Let us see, then, how we can apply the insights from Meadow Mari (see section 3.4.2) to the present case.

For Meadow Mari it was crucial that *ške* could establish a dependency with a Force projection in the left periphery. Like *ške*, *es'* is also a bleached relational noun. Unlike in the case of *škenžəm ške*, the second component of *es' pr'et'* is far less bleached. This entails that it also allows a construal other than as a verbal operator. Specifically, if its construal as a reflexivizer succeeds, then it is used as such for reasons of economy. If construal as a reflexivizer results in a mismatch (singular antecedent vs. plural reflexive), it stays inert, and the dependency is encoded on the basis of *es'*. In the latter case, the split antecedent relation is established essentially in the same way as for the Meadow Mari *škenže*, the only difference being that in this respect Erzya is less constrained than Mari.

Since at this point the full range of data is lacking, the best I can do is offer a speculation. Note that in the unmarked case – split antecedents of pronominals – there are no constraints. So, it is the presence of constraints rather than their absence that needs an explanation. I would speculate then that it is the less than fully bleached character of *pr'et'* that facilitates a construal of *es' pr'et'* as a possessive construction, and hence provides *es'* with some of the freedom of a pronoun.

6.5.3 Dative experiencer predicates

The dative form *es't'ende* is usually bound within the immediate simple clause unless it is an argument of a dative experiencer verb in a relative clause. The sentence in (38a) is such a case: *es't'ende* is a dative argument of a dative experiencer verb *er'avoms* 'to be needed, necessary' and is bound by the matrix subject *Pet'es'* and cannot be bound locally⁶. In contrast, (38b) presents the context of an agent-theme verb in a finite relative clause, where the dative form *es't'ende* must be locally bound.

⁶For Erzya I only have the data on dative experiencer predicates for the finite relative clauses, but not for the participial clauses where a similar effect is to be expected (as it happens in Meadow Mari and Komi-Zyrian). This is due to the fact that participial clauses with complements are rare and hard to elicit in Shoksha.

- (38) a. Pet'e-s'_i maks-y-ze Van'e-t'e_j
 Peter-DEF.NOM give.present-PRT-3SG.O.3SG.S Vanja-DAT
 alaše-t' kona-s' es'-t'e-nde_i / son'e-nde_j
 horse-DEF.GEN who-DEF.NOM self-DAT-3SG / he.DAT-3SG
 er'av-e.
 be.necessary-PRS.3SG
Peter gave to Vanja a horse as a present which was necessary to him(self).
- b. Pet'e-s'_i ard-s' loman'-t'e_j kona-s' tij-s'
 Peter-DEF.NOM go-PRT.3SG man-DAT who-DEF.NOM do-PRT.3SG
 es'-t'e-nde_j / son'e-nd'e_i kuda.
 self-DAT-3SG / he.DAT-3SG house
Peter went to the man who built himself / him a house.

This non-standard behaviour the Erzya *es'* displays as an argument of dative experiencer verbs. All such verbs have a dative experiencer argument and a theme nominative argument, like the verb *er'av-e* 'be necessary, needed-PRS.3SG' (frozen in 3rd person singular).

- (39) Ton mon'en' er'av-at.
 you I.DAT be.necessary-PRS.2SG
You are necessary to me. (I need you) (N. Serdobolskaya, p.c.)

Another example of the same effect is shown in (40) with the Russian borrowing *nравит's'a* 'appeal to'.

- (40) Pet'e-s'_i ur'vak-s styr'i-ŋgi-t' naŋ-ks
 Peter-DEF.NOM marry-PRT.3SG girl-DIM-DEF.GEN top-TRANSL
 kona-s' es'-t'e-nde_i нравит's'a.
 which-DEF.NOM self-DAT-3SG appeal.to.PRS.3SG
Peter married a girl who appealed to him. (Ivanov and Fedko 2006a)

The long-distance binding option is open for *es't'ende* only in the context of dative experiencer verbs in relative clauses and not with agent-theme verbs. Additionally, when "looking" for an antecedent *es't'ende* completely "ignores" the nominative subject of the finite relative clause. I assume that similarly to Meadow Mari this result is brought about by two factors. On the one hand, according to Belletti and Rizzi (1988); Pesetsky (1995), dative experiencer verbs have an unaccusative derivation, hence the experiencer *es't'ende* can be bound by the theme once the latter undergoes A-movement. I further assume that in modifying relative clauses the theme does not move into the T-domain, because the left periphery in relative clauses is 'weaker' than, for instance, 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. Hence, in the context of dative experiencer predicates in relative clauses Erzya *es't'ende* occupies a

relatively high position. On the other hand, the preferred antecedent position in SpecTP to which *es't'ende* is linked via the Force head F is empty. Thus, an exempt configuration is created. Thus, I expect *es't'ende* to behave as an exempt anaphor in this kind of context and to be able to take as antecedents subjects even higher up on the spine.

In this subsection I discussed the ability of the dative form *es't'ende* to be long distance bound as an argument of a dative experiencer predicate in a relative clause. I accounted for it based on the properties of dative experiencer predicates and the way *es'* is interpreted via the Force head F in the left periphery. I leave to the further research the question of whether the dative form of the complex reflexive *es' pr'et'e* can demonstrate long distance binding properties in this context.

6.6 Methodological remarks

The Erzya data were obtained through questionnaires which considerably limited the coverage of the empirical evidence. To compensate, I widely used the corpora of texts in Shoksha Erzya (FUCorpora) collected during the fieldtrips of the Lomonosov Moscow State University.

One of the issues that surfaced during these studies was the possibility of complex reflexive, something like *es' es't'ende*, in Shoksha Erzya – cf. (41)–(42). The first sentence of example (41) illustrates the use of *es'* next to a word *ez'dynd* which seems very similar to an ablative form of *es'*. In my opinion, this word behaves as a postposition, it can bear possessive markers and it has a reflexive meaning only in the presense of *es'*. The second sentence in (41) shows that with no *es'* as a complement of the postposition *ez'dyst* ‘*ez'*-ABL-P.3PL has a pronominal meaning ‘from them’.

- (41) Potom nachal otdel'at' es' ez'-dy-nde štoby syn'
 afterwards began separate self ez'-ABL-P.3SG so.that they
 er'a-z-t samostojatel'no vot. Otdal'alas' ez'-dy-st.
 live-OPT-PRS.3PL independently so distance.oneself ez'-ABL-P.3PL
*And then she started to separate herself (from them), so that they live
 independently. She distanced herself from them.* (FUCorpora)

- (42) K'in'ižka-s' s'ormadu-v-e avtor-t'e-st es' ez'-dy-nde.
 book-DEF.NOM write-VAL-3SG author-DEF.GEN self ez'-ABL-P.3SG
The book is written by the author about himself.
 (Ivanov and Fedko 2007: (7))

Another interesting issue about the Shoksha Erzya dative form *es't'ende* is the possibility of a discourse antecedent if the referent and, hence, the possessive markers on *es'* are of 1st or 2nd person. Example (43) is taken from the text

‘Wolves’ which tells about the abundance of wolves in the region and various unfortunate stories of people’s encounters with them.

- (43) Ve-st’ es’-t’e-n’ik kardas aj-suva-st’ tože.
 one-P.3PL self-DAT-P.1PL yard IPF-enter-PRT.3PL also
Once (they) even wanted to come into our yard. (FUCorpora)

The Meadow Mari *škenže* also allows for discourse antecedents in case of 1st and 2nd person in the possessive forms (not covered in the present work).

6.7 Summary

In this chapter I discussed the reflexive strategies in Shoksha Erzya. They are notably different from those in the related languages. The verbal strategy used with a limited subclass of agent-theme verbs is manifested by the choice of verbal agreement and not by a dedicated detransitivizing suffix as in Khanty, Meadow Mari, Komi-Zyrian and Besermyan Udmurt.

Shoksha Erzya has a body-part reflexive *es’ pr’et’* derived from the word *pr’a* ‘head’. Unlike complex reflexives in Meadow Mari, Izhma Komi-Zyrian and Besermyan Udmurt it can be bound also by non-subject antecedents. Apart from *es’ pr’et’* there is also a pronoun *es’* in Shoksha Erzya which does not constitute a primary reflexive strategy (Faltz 1985), but can license reflexivity in dative objects and PostPs. Both *es’ pr’et’* and *es’* must be locally bound.

The complex reflexive *es’ pr’et’* allows split antecedents. I argue that this becomes possible because of the less than fully bleached character of *pr’et’* which allows it to be construed in two different ways. If its construal as a reflexivizer succeeds, it is used as such for reasons of economy: *pr’et’* covertly moves onto the verb and enforces reflexivity. If construal as a reflexivizer results in a mismatch (singular antecedent vs. plural reflexive), it stays inert, and the dependency is encoded on the basis of *es’*. Further, I extend my analysis of the Meadow Mari *ške* to *es’* and argue that it is interpreted via the Force projection in the left periphery.

The dative form of *es’ – es’t’ende* – as an argument of a dative experiencer predicate in a relative clause is bound by a matrix subject. Similarly to Meadow Mari, this fact is accounted for based on the properties of dative experiencer verbs and the assumption that relative clauses have weaker left periphery.

7.1 Chapter 1: Introduction

This dissertation analyses the reflexivity patterns in five Uralic languages from the point of view of a minimalist approach to binding along the lines of Reuland (2011). Chapter 1 opens with a discussion of the requirements for a binding theory to be a useful tool for research and description of less-studied languages. It further surveys a number of current approaches to binding – namely Levinson (2000); Safir (2004); Schlenker (2005); Hornstein (2000), and Rooryck and Vanden Wyngaerd (2011) – assessing their cross-linguistic adequacy and minimalist assumptions.

The main part of chapter 1 is devoted to the approach I adopt which is largely based on Reuland (2011). It is founded on the assumption that the C_{HL} cannot distinguish two tokens of a given variable in the local domain without order and hierarchy (IDI constraint). To satisfy the IDI constraint, languages use various strategies to license reflexivity. These strategies can be divided into two large groups: detransitivisation accompanied by bundling and protection. Detransitivisation eliminates one of the occurrences of the variable, while bundling operation allows both θ -roles to be assigned to the remaining argument of the verb. Protection adds complexity to one argument (usually the object argument), keeping the two occurrences of a variable formally distinct. Depending on the morphosyntactic composition of the protecting element, it can merely license reflexivity or also enforce it.

The semantics of SELF-marking is based on the ability of reflexive pronouns

to have proxy readings (Jackendoff 1992). Assuming that a reflexive pronoun consists of two parts: a pronominal part and a *self* element, Reuland (2011) discusses two options for the semantic composition of *self* and the Skolem function denoted by the pronoun. In the unmarked case, the noun *self* is covertly attached to the transitive predicate and contributes a proxy relation to the non-reflexive pronoun. The marked option, invoked if a reflexive pronoun occupies an exempt position, presupposes that *self* composes with the Skolem function directly.

An anaphoric expression can be interpreted in one of the three major components of the language system: narrow syntax, the C-I interface and the discourse component. Both the theoretical explorations of the issue Reuland (2001, 2011) and the experimental evidence Koornneef (2008); Koornneef et al. (2011) support the claim that, in terms of economy, encoding a dependency in narrow syntax is cheaper than encoding it at the C-I interface, which in turn is cheaper than encoding it in the discourse. There are two major ways of encoding dependency in the narrow syntax: by movement of a *self* or a body part element onto the verb or by chain formation. In the case of Agree-based chains, for an element to be visible for syntactic computation, it should have unvalued formal features that could be valued by the Agree operation creating a chain with an element valued for these features.

The last part of chapter 1 is devoted to the puzzles that the Uralic languages in focus pose for binding theories. I discuss three of them. Firstly, Khanty allows local binding of pronominals. Secondly, semi-reflexives in Meadow Mari, Komi-Zyrian, Udmurt, and Erzya allow split antecedents. Furthermore, they show unexpected availability of long-distance binding as arguments of dative experiencer predicates in finite relative clauses while normally (as arguments of agent-theme verbs) they must be bound locally or within the first finite clause. Each of the next five chapters is devoted to the description and analysis of the data in one of the languages – Khanty (chapter 2), Meadow Mari (chapter 3), Komi-Zyrian (chapter 4), Besermyan Udmurt (chapter 5), and Erzya (chapter 6).

7.2 Chapter 2: Khanty

Khanty stands apart in the list of Uralic languages under investigation, as its anaphoric system is very different from that of the other four languages. The main puzzle it poses is that, *prima facie*, Khanty allows pronominals to be locally bound to express reflexivity. This potentially could be very problematic for the approach I adopt along the lines of Reuland (2011), as it would be a violation of the core principle of the theory – the IDI constraint. Besides, locally bound pronominals might also pose a problem for the conditions on chain formation. 3rd person pronominals carry a number ϕ -feature. Each occurrence of the number feature in the numeration receives its own independent interpre-

tation, therefore deleting this feature in the process of chain formation would violate the principle of the recoverability of deletions.

Yet, as it turns out at a closer inspection, for a pronominal in Khanty to be locally bound, the verb must agree with the object. The object agreement prevents chain formation. It also licenses a null pronoun. I argue that the overt 3rd person pronoun forms a constituent with the null object thus creating complexity to satisfy the IDI constraint.

Khanty also employs two other ways of licensing reflexivity. Like other languages discussed, it makes use of a detransitivisation strategy using the suffix *-ijl-*. This strategy can be used with a closed subclass of agent-theme verbs. When combined with *-ijl-*, the verb undergoes a bundling operation that reduces the internal argument of the predicate and creates a complex agent-theme role. The reduction of the internal argument is evidenced with the help of Jackendoff's wax museum context: if there is no object, it cannot have a proxy reading. The only argument left keeps properties of both agent and theme.

The third, optional strategy used in Tegi Khanty is overt doubling – a reflexive strategy previously unattested for in Khanty. The pronominal *tuw* 'he' is doubled to create a reflexivizer *tuw tuwet*: the first element of it copies the case of the antecedent, and the second checks the local case. This strategy is optional in the sense that in all the cases where *tuw tuwet* is used to convey a reflexive relation, it is interchangeable with the the locally bound pronominal in combination with the object agreement on the verb. The analysis I propose for the facts of Tegi Khanty is fully applicable to other varieties of Khanty that do not show overt doubling.

In the concluding section of chapter 2, I discuss how the Khanty facts can serve as a litmus test when assessing the cross-linguistic adequacy of binding theories discussed in chapter 1. As it turns out, none of the competing approaches have the apparatus to account for the interplay between object agreement and pronominals, as the relevant factor does not reside in the bound element itself.

7.3 Chapters 3–6: from Meadow Mari to Erzya

Licensing reflexivity in the other four languages under discussion – Meadow Mari, Komi-Zyrian, Besermyan Udmurt and Erzya – is similar in many respects. In this section I will contrast various aspects of the systems to show where they differ and to what extent they are alike.

7.3.1 Detransitivisation and bundling

Just like Khanty, the other four languages under investigation employ a detransitivisation operation accompanied by bundling as one of the ways to license reflexivity. In Meadow Mari it is marked by suffixes *-əlt-* and *-alt-*. Komi-Zyrian

uses the detransitivising suffixes *-č'* in the Pechora dialect and *-č'* and *-ys'* in the Izhma dialect. Besermyan Udmurt employs the detransitivising suffix *-iš'k-*. Shoksha Erzya sticks out in this respect: it encodes reflexivity by omitting the object and having only subject agreement on the verb.

This type of strategy reduces the internal argument of a two-place predicate and bundles the internal role (theme) and the external role (agent) into a composite agent-theme role. In all the languages discussed, lexical (affixal) reflexivization strategy is limited to a subclass of agent-theme verbs, confirming the generalization expressed by Reinhart (2002); Marelj (2004); Reinhart and Siloni (2005). The evidence for valence reduction comes from the unavailability of the proxy-readings for the detransitivised predicates in the wax museum context (Jackendoff 1992).

All the suffixes listed above also can introduce other operations affecting argument structure – middle (Meadow Mari *-alt-* and Izhma Komi-Zyrian *-ys'*), passive and impersonal (Meadow Mari *-əlt-* and *-alt-*, and Besermyan Udmurt *-iš'k-*), as well as reciprocal (with inherently reciprocal verbs: Meadow Mari *-alt* and *-əlt*, Izhma Komi-Zyrian *-ys'*, and Besermyan Udmurt *-iš'k-*).

7.3.2 Possessive suffixes

Possessive suffixes play an important role the morphological composition of the semi-reflexives and complex reflexives in Meadow Mari, Komi-Zyrian and Besermyan Udmurt. In Erzya, their role is less important as they feature only in combination with the bare form *es'* as an argument of a postposition and in the dative form *es't'ende*. As shown for Meadow Mari, the semi-reflexives in the languages discussed have a structure of a possessed noun.

In Meadow Mari, possessive suffixes behave as pronominal elements but unlike personal pronouns they cannot be used deictically. They can be bound, but can also get a discourse antecedent. 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 and (co-)reference. The same holds true for Besermyan Udmurt. However, as discussed in section 5.1.1, in certain contexts the possessive suffixes in Besermyan Udmurt seem to have a preference for being locally bound. The relevant data is lacking for Komi-Zyrian. Judging by the behaviour of *ač'ys* in Pechora Komi-Zyrian, I assume that in Pechora the possessive suffixes pattern together with their counterparts in Meadow Mari and Besermyan Udmurt. In contrast, for Izhma Komi-Zyrian I expect that the possessive suffixes should be bound within a finite clause. Establishing these facts has to be left for further research.

7.3.3 Complex reflexives

Meadow Mari, Izhma Komi-Zyrian, Besermyan Udmurt and Erzya employ complex reflexives. The Izhma Komi-Zyrian *ač'ys as'se* and the Besermyan Udmurt

asôze ač'iz are quite similar in structure. In both cases it is a doubled semi-reflexive, one component of which copies the case of the subject, the other takes the local case. Moreover, both parts agree with the antecedent via the possessive suffixes. In Meadow Mari the complex reflexive *škenžom ške* consists of the form *škenže* that takes the local case and a bare form *ške*. Erzya is sufficiently different: *es' pr'et'* consists of a bare form *es'*, a cognate of semi-reflexive pronouns in other Finno-Ugric languages (Majtinskaja 1979), and the word *pr'a* 'head' in the relevant case form.

The complex reflexives also differ in the way they license reflexivity and their binding constraints. The Meadow Mari *škenžom ške* enforces reflexivity. Hence, it must be always bound within a coargument domain. It can be bound only by the subject of the clause, and it does not allow split antecedents.

Both the Izhma Komi-Zyrian *ač'ys as'se* and the Besermyan Udmurt *asôze ač'iz* must be locally bound. The Besermyan Udmurt *asôze ač'iz* does not require a subject antecedent and can be used in non-coargument positions with certain postpositions (the relevant data for Izhma Komi-Zyrian is missing). These two complex reflexives do not enforce reflexivity. Their locality restrictions follow from the way the dependency is established. One of the components copies the case of the antecedent (subject), while the second gets the case of the argument. The case of the first element needs to get licensed. The nearest licenser is the T-node, the feature sharing creates a dependency with the subject and enforces locality of the antecedent. The Besermyan Udmurt *asôze ač'iz* does not allow split antecedents, I expect the same for the Izhma Komi-Zyrian *ač'ys as'se*.

The Erzya *es' pr'et'* must be locally bound, but can be used in non-coargument positions. It requires a c-commanding antecedent, but the antecedent does not need to be the subject of the clause. In that respect *es' pr'et'* differs from the complex reflexives in Meadow Mari and patterns together with Besermyan Udmurt, as well as the complex reflexives in English and Dutch. An interesting quirk in its behaviour is that, inside a postpositional phrase, *es' pr'et'* can be bound only by the subject of the clause and not by a c-commanding dative object. I argue that *es' pr'et'* enforces reflexivity by covert movement of *pr'et'* onto the verb. Once *pr'et'* moves, *es'* must be covalued with its coargument. However, if the covert movement of *pr'et'* is blocked, namely in postpositional phrases, *es' pr'et'* does not enforce reflexivity and is interpreted via the left periphery the same way as standalone *es'*.

7.3.4 Semi-reflexives

The Meadow Mari *škenže*, the Komi-Zyrian *ač'ys*, and the Besermyan Udmurt *ač'iz* all require a c-commanding antecedent which is a subject of the clause (I lack relevant data for the Erzya *es'*). They differ, however, in their locality constraints. The semi-reflexive *ač'iz* in Besermyan Udmurt, as well as *es'* in Erzya must be locally bound. In Meadow Mari and Komi-Zyrian the semi-reflexives

must be bound within the first finite clause. However, for the Meadow Mari *škenže*, only the infinitival clauses are transparent for binding. Pechora Komi-Zyrian *ač'ys* can be long-distance bound also as an argument of the embedded participial clause formed with *-əm-*. Izhma Komi-Zyrian is least constrained: it allows long-distance binding across infinitival, participial (both *-is'*- and *-əm-*) and nominalized embedded clauses.

The Meadow Mari *škenže*, the Komi-Zyrian *ač'ys*, and the Besermyan Udmurt *ač'iz* all exhibit a rather peculiar behaviour for a reflexive. Together with the Erzya *es' pr'et'* they allow split antecedents. Additionally, all four unexpectedly allow nonlocal binding in the context of dative experiencer predicates.

I account for long-distance binding in Meadow Mari based on its ability to function as an adnominal intensifier by relating the referent of a given constituent to a set of alternative referents. If such a role of *šken* is grammaticalized, it can be encoded in the C-domain (Bianchi 2001; Sigurdsson 2004b, 2011; Delfitto and Fiorin 2011), for instance by some Force head F. Further, I assume that infinitival clauses have a deficient F, which depends for its value on the first finite F. The latter forms an absolute upper boundary. Assuming there is another equidistant non-F head in the left periphery of the infinitival clause, it can serve as an ‘escape hatch’ for *škenže* to get long-distance bound by the matrix subject.

I extend this account to Pechora Komi-Zyrian, stipulating that the left periphery of participial clauses formed with *-əm-* also has a deficient F and an equidistant non-F head that can serve as an escape hatch to obtain long-distance binding. For Izhma *ač'*- I claim that it does not require a link to the Force head F for interpretation. Like in Pechora, *ač'ys* composes with the Skolem function directly. The choice of the antecedent depends on the properties of the possessive suffix. Under the assumption that the possessive suffixes should be locally bound within a finite clause, the syntactic constraints on *ač'ys* ensue. The requirement for possessive suffixes to be locally bound implies that they are deficient in some way, yet not in such a way that it could be valued by an A-chain. The properties of possessive suffixes also become relevant in Besermyan Udmurt, where *ač'iz* must be locally bound. I suggest that this could be deducible from the properties of the possessive affixes. Another way to account for the aforementioned facts would be to stipulate the inability of *ač'iz* to skip the local Force. In Erzya, the mechanism of interpretation of *es'* is the same as for the Meadow Mari *šken*, but *es'* must be bound locally. This implies that the left-periphery of Erzya infinitivals is sufficiently different from that of Meadow Mari infinitivals.

7.3.5 Bare forms

In all four languages under discussion in chapters 3–6, bare forms are employed, the forms without any case and possessive markers. The Meadow Mari *ške* and the Izhma Komi-Zyrian *ač'ys* can be used a possessive reflexive as well as

a complement of the postposition bearing a possessive suffix. One difference between them is that *ške* can be used as a possessor of a NP in all syntactic positions, while the Izhma Komi-Zyrian *as* cannot express a possessor of a direct object NP. In Pechora Komi-Zyrian, the bare form *as* is used only a complement of a postposition. The same holds true for the Shoksha Erzya *es'*, although in literary Erzya it is used as a possessive reflexive. In Besermyan Udmurt, the bare form *as* is also used only in postpositional phrases (20) and cannot be employed as a possessive reflexive, at least not as an argument of a direct object NP. The locality constraints for the Izhma Komi-Zyrian *as*, the Besermyan Udmurt *as*, and the Erzya *es'* are the same as for the full forms bearing possessive suffixes (for Meadow Mari and Pechora Komi-Zyrian the data is missing).

Moreover, the Meadow Mari *ške* can be used as an intensifier. The Erzya *es'* can also function like that but only when modifying dative arguments.

7.3.6 Puzzling issues

In all four languages there are two main issues: semi-reflexives allow split antecedents and allow long-distance binding as dative arguments of dative experiencer verbs in relative clauses.

For the former issue, I propose an account based on the link between the semi-reflexives and the F-head in the left periphery. When the semi-reflexive is singular, its domain is determined by F, which in turn shares features with T (Chomsky 2008), hence the subject-orientation. In the case of the plural form of the semi-reflexive, I only have to assume that F restricts its domain to pluralities that are sufficiently salient, in particular those that F bears a relation to, namely pluralities containing the (denotation of the) associated subject. An open question that has to be left for further research is why, in some of the languages, the semi-reflexive cannot take split antecedents that are separated by a clause boundary (Meadow Mari) while in others it can (Izhma Komi-Zyrian: both non-finite and finite clause boundaries).

The ability of semi-reflexives in Uralic languages to take split antecedents turns out to be quite problematic for most current minimalist binding theories. This is because the assumption that anaphors cannot take split antecedents is wired in most of them through the way a dependency between an anaphor and its antecedent is established. Rooryck and Vanden Wyngaerd (2011) derive binding from the operation Agree. The prohibition of split antecedents comes from the fact that Agree is unique, “i.e. can only involve one probe and one goal at the same time”. Drummond et al. (2011) building on Hornstein (2000) reduce binding to movement. They argue that an anaphor is the morphological offspring of a copy of the antecedent. Following this approach, it is logical to conclude that split antecedents are disallowed because it is impossible to move more than one DP into the same position. Schlenker (2005) makes provisions to account for split antecedents for plural pronouns, however his analysis of

reflexives as arity reducers leaves no leeway in that respect. In contrast, the approach taken in this dissertation allows for more flexibility and provides tools to account for empirical data.

As for the behaviour of semi-reflexives as dative arguments of dative experiencer verbs in relative clauses, I account for it based on the properties of dative experiencer verbs, namely the unaccusative derivation. The psych predicates of the *appeal to*-type assign 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 (Belletti and Rizzi 1988; Pesetsky 1995). I assume that modifying relative clauses have a weaker left periphery 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. In general, binding restrictions on semi-reflexives are defined by the link between Force in left periphery and the semi-reflexive on the one hand and the link between Force and T/SpecTP on the other. Given that SpecTP is not filled, no such link between Force and the low theme argument is created, hence no privileged local binding relation mediated by Force is established. Consequently, the semi-reflexive as an argument of a dative experiencer predicate in an embedded relative clause behaves as an exempt (logophoric) pronoun. This is supported by empirical evidence for the Meadow Mari *škenže* and is a prediction for its counterparts.

On balance, I claim that the special properties of the semi-reflexives in Meadow Mari, Komi-Zyrian, Erzya and Udmurt are the result of their morpho-syntactic composition, namely the presence of possessive suffixes which in all other respects behave as possessive pronominals.

7.4 Conclusion

The approach to binding based on Reuland (2011) used in this dissertation disentangles various factors playing a role in establishing interpretive dependencies, including properties of predicates and syntactic chains. The puzzling behavior of reflexive strategies under discussion is accounted for in terms of their morphosyntactic composition in tandem with general properties of grammatical computation. It also allows a unified treatment of verbal and nominal anaphora. The approach puts strict limits on the expected variation space of the anaphoric systems in natural language. This space is defined by the various ways to meet the requirements of IDI, including the conditions on bundling, and the chain condition. For instance, no system is predicted to exist in which a simplex pronominal that is fully specified for ϕ -features is coargument-bound, unless the two following conditions are met:

- (i) the predicate has undergone detransitivisation+bundling, and
- (ii) the pronominal lacks structural Case.

No system is predicted to exist either, in which a *prima facie* coargument bound pronominal is not demonstrably complex, with the variable separated from its binder by either an external or a DP-internal A'-intervener, or actually can be shown to be on a different grid. The study shows that, indeed, variation is not random.

In the account presented, only general principles underlying grammatical processes are used. Hence, the analysis comes for free, modulo some specific properties of Uralic languages, such as the existence of object agreement or possessive markers. Although sometimes the data necessary for a conclusive analysis is missing, the approach I used makes it clear what the gaps are and allows predictions to be made which could be tested in further research. Moreover, I showed that there are important universals to be discovered within the linguistic diversity. Thus, this study provides support for a general research strategy that does not take linguistic phenomena at face value, but only draws conclusions on the basis of detailed investigation.

In conclusion, this dissertation demonstrates how descriptive fieldwork and theoretical research can be mutually beneficial and how their symbiosis deepens our understanding of the general principles underlying language, and the way these are rooted in our cognitive system.

Samenvatting in het Nederlands

Deze dissertatie analyseert reflexiviteit in vijf Oeraalse talen op basis van een minimalistische benadering van binding. De bestudeerde talen zijn vijf Oeraalse minderheidstalen gesproken in de Russische Federatie: Weide-Mari, Komi-Zurjeens, Chanti, Besermjan Oedmoerts en Erzja.

Ik begin met een bespreking van de voorwaarden waaraan een bindingstheorie moet voldoen om bruikbaar te zijn voor het onderzoeken en beschrijven van weinig bestudeerde talen. Hierna neem ik een aantal hedendaagse benaderingen van binding onder de loep (te weten Levinson (2000); Safir (2004); Schlenker (2005); Hornstein (2000), en Rooryck en Vanden Wyngaerd (2011)), waarbij ik zowel de crosslinguïstische adequaatheid als de minimalistische aannames van deze benaderingen beoordeel.

Het grootste deel van hoofdstuk 1 is gewijd aan de benadering die ik zal gebruiken, en die gebaseerd is op de observatie dat een computationeel systeem alleen onderscheid kan maken tussen verschillende voorkomens van hetzelfde element als de werkruimte van het systeem hiervoor genoeg structuur biedt (Reuland 2011). Ik neem aan dat dit van toepassing is op identieke variabelen in het co-argumentdomein. Om precies te zijn, omdat de C-I interface tussen het C_{HL} (computationeel systeem van de menselijke taal) en het interpretatiesysteem geen volgorde kent en ook puur syntactische hiërarchie daar niet gerepresenteerd kan worden, zijn verschillende voorkomens van dezelfde variabele binnen een lokaal domein op het niveau van deze interface niet van elkaar te onderscheiden (de ‘Inability to Distinguish Indistinguishables’-constraint), wat tot een ongedetermineerdheid leidt. Om te voldoen aan de IDI-constraint maken talen gebruik van diverse strategieën om reflexiviteit te licentiëren. Deze strategieën vallen in twee soorten uiteen: detransitivisatie en bundeling, en bescherming. Detransitivisatie elimineert één van de voorkomens van de variabelen, waarna beide θ -rollen worden ‘gebundeld’ en samen toegewezen aan het overblijvende werkwoordsargument. Bescherming voegt complexiteit toe aan één van de argumenten (gewoonlijk het lijdend voorwerp), waardoor de twee voorkomens

van de variabele formeel van elkaar te onderscheiden blijven. Afhankelijk van de morfosyntactische samenstelling van het beschermende element kan dit reflexiviteit licentiëren of zelfs afdwingen.

Een anaforische uitdrukking kan worden geïnterpreteerd via één van de drie hoofdcomponenten van het taalsysteem: de syntaxis in stricte zin ('narrow syntax'), de C-I-interface en de discourse-component. Zowel de theoretische studie van dit onderwerp (Reuland 2001, 2011) als de resultaten van experimenteel onderzoek (Koornneef 2008; Koornneef et al. 2011) ondersteunen de claim dat het coderen van een afhankelijkheid in de syntaxis economisch voordeliger is dan het coderen ervan op de C-I interface, wat op zijn beurt weer voordeliger is dan het coderen van anaforische afhankelijkheden in de discourse. Er zijn ruwweg twee manieren om afhankelijkheid te coderen in de syntaxis: door een *zelf*-element (of equivalent daarvan zoals een 'lichaamsdeel-reflexief') naar het werkwoord te verplaatsen, of door ketenvorming. In het tweede geval is een element alleen zichtbaar voor de syntactische berekening als het ondergespecificeerde formele features (kenmerken) bezit die een waarde kunnen krijgen door de operatie Agree (congruentie), waarbij een keten gecreëerd wordt met een ander element dat al wel een waarde voor deze kenmerken bezit.

Tenslotte bespreek ik de diverse puzzels die de besproken Oeraalse talen vormen voor bestaande bindingstheorieën. Ten eerste staat het Chanti lokale binding van voornaamwoorden toe. Ten tweede kennen het Weide-Mari, Komi-Zurjeens, Oedmoerts en Erzja semi-reflexieven met 'gespleten' antecedenten. Ten derde kunnen ze verrassend genoeg over lange afstand gebonden worden als ze een argument zijn van een 'datief-experiencer-predikaat' in een finiete betrekkelijke bijzin, terwijl ze gewoonlijk (als argument van een agens-thema-werkwoord) lokaal of binnen de eerste finiete deelzin gebonden dienen te worden. Elk van de volgende vijf hoofdstukken is gewijd aan de beschrijving en analyse van de data in één van de talen – Chanti (hoofdstuk 2), Weide-Mari (hoofdstuk 3), Komi-Zurjeens (hoofdstuk 4), Besermjan Oedmoerts (hoofdstuk 5) en Erzja (hoofdstuk 6).

Chanti neemt een aparte plaats in op de lijst van bestudeerde talen, omdat het anaforische systeem van het Chanti erg verschilt van dat van de andere vier talen. De belangrijkste puzzel is dat Chanti op het eerste gezicht toestaat dat lokaal gebonden voornaamwoorden reflexief geïnterpreteerd worden. Dit is potentieel zeer problematisch voor de door mij gehanteerde aanpak in de lijn van Reuland (2011), omdat dit een overtreding zou zijn van het kernprincipe van de theorie – de IDI-constraint. Hiernaast zouden lokaal gebonden voornaamwoorden ook een probleem kunnen vormen voor de voorwaarden op ketenvorming.

Bij nadere bestudering blijkt echter dat voornaamwoorden in Chanti alleen lokaal gebonden kunnen worden als het werkwoord congrueert met het lijdend voorwerp. Deze congruentie voorkomt ketenvorming. Ook licenseert het een leeg voornaamwoord. Ik betoog dat het overte derdepersoonsvoornaamwoord een constituent vormt met het lege voornaamwoord en op die manier de com-

plexiteit creëert die nodig is om aan de IDI-constraint te voldoen.

Hiernaast kent het Chanti nog twee andere manieren om reflexiviteit te licentiëren. Net als de andere besproken talen maakt het gebruik van een detransitivisatiestrategie door middel van het suffix *-ijł-*. Deze strategie kan worden ingezet bij een gesloten subklasse van ‘agens-thema’-werkwoorden. De derde, optionele strategie die gebruikt wordt in het Tegi Chanti is overte verdubbeling – een reflexivisatiestrategie die nog niet eerder in het Chanti is opgemerkt. De analyse die ik voorstel voor de data uit het Tegi Chanti is volledig toepasbaar op andere varianten van het Chanti waarin deze overte verdubbeling niet voorkomt.

De Chanti-data kunnen dienen als lakmoesproef bij het beoordelen van de crosslinguïstische adequaatheid van de in hoofdstuk 1 besproken bindingstheoriën. Het blijkt dat geen van de concurrerende benaderingen in staat is om de interactie tussen voornaamwoorden en congruentie met het lijdend voorwerp te verklaren, omdat de sleutelfactor niets te maken heeft met de eigenschappen van het gebonden element zelf.

De licentiëring van reflexiviteit in de andere vier besproken talen – Weide-Mari, Komi-Zurjeens, Besermjan Oedmoerts en Erzja – werkt in veel opzichten hetzelfde. Net als het Chanti maken deze vier talen gebruik van een detransitivisatie-operatie in combinatie met bundeling als één van de manieren om reflexiviteit te licentiëren.

De beschermingsstrategie in het Weide-Mari, Komi-Zurjeens, Besermjan Oedmoerts en Erzja zien we aan het werk in semi-reflexieven en complexe reflexieven. Bezittelijke suffixen spelen een belangrijke rol in de morfologische samenstelling hiervan. Hun rol is minder belangrijk in het Erzja, omdat ze alleen voorkomen in combinatie met de kale vorm *es*’ als argument van een achterzetsel en in de datief *es’t’ende*. Aan de hand van het Weide-Mari laat ik zien dat de semi-reflexieven in de besproken talen de vorm hebben van een possessiefconstructie. In het Weide-Mari gedragen bezittelijke suffixen zich als voornaamwoordelijke elementen, maar in tegenstelling tot persoonlijke voornaamwoorden kunnen ze niet aanwijzend gebruikt worden. Ze kunnen gebonden worden, maar ook verwijzen naar een antecedent in de discourse. Ik neem aan dat de interpretatie van deze bezittelijke suffixen op dezelfde manier verloopt als de interpretatie van voornaamwoorden, namelijk door middel van binding dan wel (co-)referentie.

Het Weide-Mari, Izjma Komi-Zurjeens, Besermjan Oedmoerts en Erzja kennen complexe reflexieven. Het Izjma Komi-Zurjeense *ač’ys as’sē* en het Besermjan Oedmoertse *asōze ač’iz* hebben een vergelijkbare structuur. In beide gevallen gaat het om een verdubbelde semireflexief; het eerste deel kopieert de naamval van het onderwerp, het tweede deel staat in de lokale naamval. Daarnaast vertonen beide delen congruentie met het antecedent via hun bezittelijke suffix. In het Weide-Mari bestaat de complexe reflexief *škenžəm ške* uit de vorm *škenže* in de lokale naamval en een kale vorm *ške*. Het Erzja verschilt hier voldoende van: *es’ pr’et’* bestaat uit een kale vorm *es’*, een cognaat van diverse

semi-reflexieve voornaamwoorden in andere Finoegriscche talen (Majtinskaja 1979), en het woord *pr'a* 'hoofd' in de relevante naamvalsform.

De complexe reflexieven verschillen niet alleen in structuur maar ook in de manier waarop ze reflexiviteit licentiëren en binding toestaan. Zowel *škenžəm ške* (Weide-Mari) als *es' pr'et'* (Erzja) dwingen reflexiviteit af. *Škenžəm ške* staat geen gespleten antecedenten toe. In tegenstelling tot zijn tegenhanger kan *es' pr'et'* (Erzja) voorkomen in niet-coargumentposities en hoeft zijn antecedent niet het onderwerp te zijn. Ik betoog dat *es' pr'et'* reflexiviteit afdwingt door middel van covertte verplaatsing van *pr'et'* naar het werkwoord. Zodra *pr'et'* wordt verplaatst moet *es'* dezelfde waarde krijgen als zijn coargument. Als de covertte verplaatsing van *pr'et'* wordt geblokkeerd, wat gebeurt in achterzetselgroepen, kan *es' pr'et'* geen reflexiviteit meer afdwingen en wordt het geïnterpreteerd via de linker periferie op dezelfde manier als op zichzelf staand *es'*.

Zowel *ač'ys as'se* (Izjma Komi-Zurjeens) als *asšze ač'iz* (Besermjan Oedmoerts) dienen lokaal gebonden te worden. Geen van deze twee reflexieven dwingt reflexiviteit af. Hun lokaliteitsrestricties volgen uit de manier waarop de afhankelijkheid tot stand wordt gebracht: één van de delen kopieert de naamval van het antecedent (het onderwerp), en het andere deel krijgt de naamval van het argument. De naamval van het eerste element moet worden gelicentieerd. De dichtstbijzijnde licentieerder is de T-knoop; hierdoor creëert het gedeelde kenmerk een afhankelijkheid met het onderwerp af en daarmee lokaliteit van het antecedent af. Het Besermjan Oedmoertse *asšze ač'iz* staat geen gespleten antecedenten toe en ik verwacht hetzelfde voor het Izjma Komi-Zurjeense *ač'ys as'se*.

Voor de semi-reflexieven geldt dat *škenže* (Weide-Mari), *ač'ys* (Komi-Zurjeens) en *ač'iz* (Besermjan Oedmoerts) alledrie dienen te worden ge-c-commandeerd door het antecedent, dat ook het onderwerp moet zijn van de deelzin (voor *es'* in het Erzja ontbreken de relevante data). Wat hun lokaliteitseigenschappen betreft verschillen ze wel van elkaar. De semi-reflexieven *ač'iz* (Besermjan Oedmoerts) en *es'* (Erzja) moeten lokaal gebonden zijn. In het Weide-Mari en het Komi-Zurjeens moeten de semi-reflexieven gebonden zijn binnen de eerste finiete deelzin. Voor *škenže* (Weide-Mari) zijn alleen infinitieve deelzinnen transparant voor binding. *Ač'ys* (Pechora Komi-Zurjeens) kan over lange afstanden gebonden worden als het een argument is van een door middel van *-əm-* gevormde ingebbede deelwoordzin. De minste beperkingen kent het Izjma Komi-Zurjeens: het staat binding over lange afstanden toe vanuit infinitieve en genominaliseerde ingebbede deelzinnen en vanuit ingebbede deelwoordzinnen (zowel met *-is'* als met *-əm-*).

Škenže (Weide-Mari), *ač'ys* (Komi-Zurjeens) en *ač'iz* (Besermjan Oedmoerts), vertonen alledrie een voor reflexieven nogal merkwaardig gedrag: net als *es' pr'et'* (Erzja) staan ze gespleten antecedenten toe. De vier genoemde reflexieven staan verrassend genoeg ook niet-lokale binding toe in de context van 'experienter-predikaten' met een datieve 'experienter'.

In mijn analyse is langeafstandsbinding in het Weide-Mari mogelijk omdat het kan functioneren als intensiverende bijvoeglijke bepaling, door de referent van een gegeven zinsdeel te relateren aan een verzameling alternatieve referenten. Als deze functie van *šken* grammaticaliseerd wordt, kan hij worden ge-encodeerd in het C-domein van de zin (Bianchi 2001; Sigurdsson 2004b, 2011; Delfitto en Fiorin 2011), bijvoorbeeld door middel van een Force-hoofd F. Ik neem verder aan dat infinitieve deelzinnen een deficiënte F hebben, die voor zijn waarde afhankelijk is van de eerste finiete F; deze vormt een absolute bovengrens voor binding. Aangenomen dat zich in de linkerperiferie van de infinitieve deelzin, in hetzelfde minimale domein, nog een niet-F hoofd bevindt, dan kan dit dienen als ‘ontsnappingsluik’ voor *škenže*, dat dan over lange afstand gebonden kan worden door het onderwerp van de hoofdzin.

Dezelfde analyse is van toepassing op het Pechora Komi-Zurjeens en het Erzja, hoewel de eigenschappen van de linkerperiferie van met *-əm-* gevormde deelwoorzinnen in de eerstgenoemde en van infinitiefzinnen in de laatstgenoemde taal enige kleine specifieke aanpassingen vereisen. Ik beweer dat *ač’-* (Izjma) geïnterpreteerd kan worden zonder connectie met het Force-hoofd F. Welk antecedent gekozen wordt hangt af van de eigenschappen van het bezittelijke suffix. De syntactische voorwaarden waaraan *ač’ys* moet voldoen volgen dan uit de aanname dat deze bezittelijke suffixen lokaal gebonden moeten worden binnen een finiete deelzin. De eigenschappen van bezittelijke suffixen zijn ook relevant in het Besermjan Oedmoerts, waarin *ač’iz* lokaal gebonden moet worden. Een andere manier om de geobserveerde feiten te verklaren is te stipuleren dat *ač’iz* niet in staat is de lokale Force-projectie over te slaan.

In alle vier de talen zijn de twee belangrijkste observaties hetzelfde: semi-reflexieven staan zowel gespleten antecedenten toe als langeafstandsbinding wanneer ze het datieve argument zijn van een experiencer-werkwoord in een betrekkelijke bijzin.

De analyse die ik voorstel voor de eerste observatie is gebaseerd op de connectie tussen semi-reflexieven en het F-hoofd in de linker periferie. In het geval van een enkelvoudige semi-reflexief wordt het domein hiervan bepaald door F; omdat F op zijn beurt kenmerken deelt met T (Chomsky 2008) wordt de semi-reflexief verbonden met het onderwerp. In het geval van een meervoudige semi-reflexief hoef ik alleen aan te nemen dat F het domein beperkt tot die meervoudige referenten die voldoende op de voorgrond staan; specifiek zijn dat referenten waarmee F een relatie heeft doordat ze ook (de denotatie van) het ermee verbonden onderwerp bevatten. Een vraag die we aan toekomstig onderzoek moeten overlaten is waarom sommige van de genoemde talen een gespleten antecedent toestaan waarvan de delen door een deelzinsgrens van elkaar gescheiden zijn (zowel finiete als niet-finiete deelzinsgrenzen in het Izjma Komi-Zurjeens) terwijl dat in andere onmogelijk is (Weide-Mari).

Het gedrag van semi-reflexieven als datieve argumenten van datief-experiencer-werkwoorden in betrekkelijke bijzinnen verklaar ik vanuit hun derivatie als onaccusatieven. Mentale predicaten van het type bevallen delen VP-intern een

inherente naamval uit aan het ‘experiencer’-argument. De experiencer bevindt zich binnen de VP in een hogere positie dan het thema, maar deze laatste kan nog een A-verplaatsing ondergaan (Belletti en Rizzi 1988; Pesetsky 1995). Ik ga er vanuit dat modifierende betrekkelijke bijzinnen een zwakkere linkerperiferie hebben dan complementzinnen; T is daarom zwakker, en er is dus geen verplaatsing op basis van een EPP-kenmerk in betrekkelijke bijzinnen, maar wel in complementzinnen. Over het algemeen worden beperkingen op binding bij semi-reflexieven gedefinieerd door de link tussen Force in de linkerperiferie en de semi-reflexief aan de ene kant en de link tussen Force en T/Spec-TP aan de andere kant. Bij een lege SpecTP wordt er geen link tussen Force en het laaggepositioneerde thema-argument gecreëerd. Daarom wordt er geen bevoorrechte, lokale, door Force gemedieerde bindingrelatie bewerkstelligd. Als gevolg hiervan gedraagt een semi-reflexief die optreedt als argument van een experiencer-predikaat in een ingebedde betrekkelijke bijzin zich als een vrijgesteld (logoforisch) voornaamwoord. Dit wordt ondersteund door empirisch bewijs wat *škenže* (Weide-Mari) betreft, en vormt een voorspelling voor de tegenhangers hiervan in de andere bestudeerde talen. Alles in aanmerking genomen, beweer ik dat de speciale eigenschappen van de semi-reflexieven in Weide-Mari, Komi-Zurjeens, Erzja en Oedmoerts het gevolg zijn van hun morfosyntactische opmaak, namelijk de aanwezigheid van bezittelijke suffixen die zich in alle andere opzichten gedragen als bezittelijke voornaamwoorden.

Het vermogen van semi-reflexieven in Oeralische talen om gespleten antecedenten toe te staan blijkt vrij problematisch te zijn voor de meeste van de huidige bindingstheorieën, omdat de aanname dat anaforen geen gespleten antecedenten toestaan ingebouwd is in de meeste van deze theorieën door de manier waarop een afhankelijkheid tussen een anafoor en zijn antecedent wordt bewerkstelligd. Rooryck en Vanden Wyngaerd (2011) leiden binding af uit de Agree-operatie. Het verbod op gespleten antecedenten volgt uit het feit dat Agree uniek is, dat wil zeggen, het kan enkel betrekking hebben op één probe en één goal tegelijkertijd. Drummond et al. (2011), gebaseerd op Hornstein (2000), reduceren binding tot verplaatsing. Ze beargumenteren dat een anafoor de morfologische weergave is van een kopie van het antecedent. Als we deze benadering volgen, dan is het logisch om te concluderen dat gespleten antecedenten niet zijn toegestaan, omdat het onmogelijk is om meer dan één DP naar dezelfde positie te verplaatsen. Schlenker (2005) voorziet in een verklaring voor gespleten antecedenten van meervoudige voornaamwoorden; echter, zijn analyse van reflexieven als ‘arity-reducers’ biedt geen speelruimte in verdere opzichten. In dit opzicht biedt de benadering in deze dissertatie meer flexibiliteit en verschaft deze juist door het beperkte apparaat de mogelijkheid om de empirische data wezenlijk te kunnen verklaren.

Het perspectief op binding dat deze dissertatie presenteert, trekt verschillende factoren die een rol spelen in het bewerkstelligen van interpretatieve afhankelijkheden uit elkaar. Daarbij brengt het werkwoordelijke en naamwoordelijke uitdrukking van reflexiviteit terug tot een gemeenschappelijke kern.

De huidige studie laat zien dat variatie in de uitdrukking van reflexiviteit niet willekeurig is, maar valt binnen vaste kaders. Tot slot toont deze dissertatie aan hoe descriptief veldwerk en theoretisch onderzoek van elkaar kunnen profiteren en hoe hun symbiose ons begrip van de eigenschappen van taal verdiept.

Curriculum Vitae

Anna Volkova was born on the 28th of August 1982 in Moscow, Russia. In 2004 she graduated with honours from the Lomonosov Moscow State University with a MA degree in Linguistics. Her master thesis explored syntactic properties of reflexive pronouns in selected Finno-Ugric languages. In 2008 she continued her research at Utrecht institute of Linguistics OTS by joining the project “Universals and the Typology of Reflexives” funded by the Netherlands Organization for the Advancement of Research (NWO). This dissertation is a result of the work she carried out in this project.

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