

Reflexive constructions in the world's languages

Edited by

Katarzyna Janic

Nicoletta Puddu

Martin Haspelmath

Research on Comparative Grammar 3



Research on Comparative Grammar

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Part I

Introduction

Chapter 1

Introducing the cross-linguistic comparison of reflexive constructions

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The topic of reflexivity has been extensively discussed in linguistics over the last few decades. It also attracted the attention of philosophers, cognitive scientists, psychologists, and even artificial intelligence scholars. The domain of reflexivity is complex and has been investigated at various grammatical levels from different theoretical perspectives. It is situated at the interface between semantics, syntax, phonology, and phonetics, and is frequently framed within the generative and functional-typological approach. The aim of this chapter is twofold. Firstly, it presents the research on reflexivity in the linguistic arena by providing a concise overview. Secondly, it introduces the present volume giving special attention to its aims, organization, language sample, and language experts.

1 Introduction

Coreference occurs when at least two linguistic expressions have the same referent, i.e. they refer to the same person or thing. Many scholars also share the opinion that the main function of reflexive constructions is to express coreference (but see Frajzyngier 2000). The investigation of reflexive constructions was frequently hidden in the linguistic arena under the umbrella term of “reflexive”, which can refer both to the form and to the function of the reflexive construction.

The topic of reflexivity has attracted the attention of various scholars, who explored it in-depth from different grammatical angles. For example, Schladt (2000)



and Everaert (2013) investigate it primarily from a syntactic perspective, whereas Huang (2000) incorporates a neo-Gricean pragmatic account. On the other hand, Reinhart (1983), Geniušienė (1987), Lazard (2007), and Kittilä & Zúñiga (2019) contribute semantic expertise.

In addition to specific grammatical descriptions, reflexivity has also been discussed in various theoretical frameworks. It is strictly related to binding phenomena in generative grammar (e.g. Chomsky 1981; Everaert 1986; Reinhart & Reuland 1993). There is also a growing body of literature approaching reflexivity from a functional-typological perspective (e.g. Faltz 1985; Geniušienė 1987; Kemmer 1993; Frajzyngier & Curl 1999; Haspelmath 2008; and König & Gast 2008). Finally, reflexivity is a subject of thorough investigation in many descriptive studies, including the contributions in the present volume. The fact that reflexivity can be investigated at various grammatical levels led many to admit that much of what counts nowadays as textbook knowledge in this empirical domain still needs further investigation.

The widespread interest in reflexivity has had important consequences for linguistic studies. It has generated a range of related terms such as “reflexives”, “reflexivizer”, “reflexive forms”, and “reflexive verbs”, which resulted in their ambiguous use. This has already been observed by Frajzyngier (2000) and Heine (2000), who pointed out that the term “reflexives” is often used in a vague sense, referring alternatively both to the form and function. This makes language comparison difficult, if not impossible. The need for terminological standardization has been noted by Haspelmath (2021), who underlines the necessity of comparative concepts in cross-linguistic studies. Consequently, he proposes a definition of “reflexive construction” as a comparative concept (see Haspelmath 2023 [this volume]).

The growing body of literature on reflexivity is primarily owed to the fact that reflexivity demonstrates remarkable crosslinguistic variation. In the first place, it involves encoding aspects (cf. König & Siemund 2000 and Déchaine & Wiltschko 2017). A survey of the contributions of the present volume shows that encoding strategies may extend from nominals, through dedicated reflexive pronouns grammaticalized into verbal affixes in some languages, to verbal strategies. Possessive or personal pronouns can also express reflexivity.

However, the classification of reflexive forms (or “reflexivizers”) encoding coreference poses problems (Puddu 2021). A typical separation runs along the morphological line, leading to a strict “verbal vs. nominal” distinction. This dichotomy was introduced by Faltz (1985) and recognized in both generative and functional-typological traditions. However, it encounters difficulties, particularly when considering those cases in which object arguments are encoded on

the verb and where the distinction between a verbal and an NP strategy relies merely on the affix vs. clitic distinction. Many scholars (e.g. König 2007; Puddu 2021) argue that this distinction should instead be viewed as a continuum. Moreover, the fact that nominal and verbal reflexives, like, for instance, *siebie* and *się* in Polish, frequently provide evidence for a common etymology further supports the gradient approach to reflexive forms (cf. Kazenin 2001). Given the above, the question of how reflexivity can be expressed across languages remains challenging in the linguistic arena (see Janic & Puddu (2023 [this volume]), in particular).

2 Structure of the volume

The present volume is a collection of 27 expert-based contributions and describes how reflexivity is encoded and functions in the six macroareas of the world (Hammarström & Donohue 2014), starting from a shared definition of reflexive construction by Haspelmath (2023 [this volume]) which posits that a reflexive construction is a grammatical construction that meets two criteria: (i) it can only be used when two argument positions of a clause require coreference, (ii) it contains a special form, called a reflexivizer, that indicates this coreference. To initiate the collaboration, we contacted language experts, providing them with several documents for inspiration. These include the position paper by Haspelmath (Haspelmath (2023 [this volume])), the questionnaire by Janic & Haspelmath (2023 [this volume]), and a model chapter by Janic on Polish (Janic 2023 [this volume]), all available in this volume. In addition, contributors were invited to consult the aforementioned study by Puddu (2021) on verbal vs. nominal reflexive constructions.

The position paper (Haspelmath (2023 [this volume])) gave the contributors a theoretical orientation toward reflexive construction. This overview article contains a systematic and comprehensive comparison of these constructions in the world's languages, discussing the most critical aspects such as conditions on coreference, types of reflexivizers, coreference expression, domains of coreference, coexpression patterns of reflexivizers, kinds of coreference, among many others. An essential part of this study are the appendices. While Appendix A (Haspelmath 2023 [this volume]) lists several universals of reflexive constructions formulated in the literature, the last two systematize the terminology related to reflexivity, in general, and coreference, in particular. Specifically, Appendix B represents a survey of technical terms used in the study of Haspelmath (2023 [this volume]), whereas Appendix C summarizes reflexive terms found elsewhere in the literature.

The questionnaire by Janic & Haspelmath (2023 [this volume]) was designed to encourage the contributors to investigate some critical points of variation of reflexive constructions addressed in the literature at the formal and functional levels. Its aim was also to draw the contributors' attention to typologically interesting facts about reflexive constructions, such as a distinction between whole-body and part-body actions or between extroverted and introverted actions. Even if the questionnaire served as a guideline for the authors to structure their descriptions, they were not obliged to follow it. If necessary, they could go beyond the scope of the questionnaire by providing language-specific insights or omit those points that did not apply to the language of their specialization. For instance, the questionnaire focuses on the synchronic aspect of reflexive constructions. However, many authors also included a discussion of the diachronic development of the reflexivizers (e.g. Abdoulaye (2023 [this volume]), Arkadiev & Durneva (2023 [this volume]), Janic (2023 [this volume]), Lahaussois (2023 [this volume]), among many others). Alternatively, they elaborated on the role of language contact in the change of reflexive construction (cf., in particular, Khachaturyan (2023 [this volume]) and Luchina (2023 [this volume])). Therefore, even though we aimed at a broad uniformity of the chapters shaped by the questionnaire, several chapters have included additional features.

Given that some of our language experts have not worked on reflexive constructions specifically and that the topic *per se* is demanding due to the inconsistent use of reflexive terminology in the literature, we wanted to reduce the workload of the contributors by providing them with the model chapter by Janic (Janic 2023 [this volume]). It served as a potential inspiration for the authors and an illustration of what they were expected to deliver.

Finally, the contributors were invited to recognize the problematic, traditional distinction between “nominal” and “verbal” reflexives discussed by Puddu (2021).

An effort has been made to ensure the quality of data. Daniel (2007) points out that typologists have often been criticized for using second-hand data. Especially for reflexive constructions, Dixon (2012: 189) suggests that reliable data can be gathered only by using an “immersion” fieldwork technique, i.e., by analyzing recorded texts or observing everyday conversation. However, the approach favored by Dixon (2012: 189) is virtually impossible when studying a phenomenon at a worldwide level. The use of secondary data is generally unavoidable in a broadly comparative study. Regarding the present volume, we have invited primarily scholars with extensive experience in fieldwork to ensure the quality of data. They delivered extensive and comprehensive descriptions of reflexive constructions based on their collected data and knowledge of the language. This provides an excellent foundation and opportunity for future comparative linguists,

bringing them as close as possible to the primary evidence for the individual languages.

The contributors used different methods to obtain data. Some obtained data directly from fieldwork, and some through corpus exploration. Yet others combined the two methods. Incidentally, it should be noted that eliciting data on reflexive constructions can be subject to cultural constraints. For instance, “giving something to oneself” is culturally absurd to Chini speakers (Lower Sepik-Ramu). Hence, they refuse to produce such sentences. The same situation holds for Oneida speakers (Iroquoian). In Thulung (Sino-Tibetan), sentences which express coreference between an agent and a recipient can be elicited, but are not produced spontaneously. Moreover, in some languages, speakers refuse to employ antagonistic verbs in reflexive constructions. For instance, in Chini, the linguistic practice does not admit the use of verbs like ‘hate’, ‘kill’, or ‘criticize’ in autopathic constructions (see the discussion in Brooks (2023 [this volume]) and on the similar phenomenon in Michelson (2023 [this volume])).

In choosing the language sample, we aimed to document genealogically diverse languages from six macroareas: Africa, Eurasia, Paponesia, Australia, North America, and South America (Hammarström & Donohue 2014). Figure 1 shows the location of the languages represented in this volume.¹

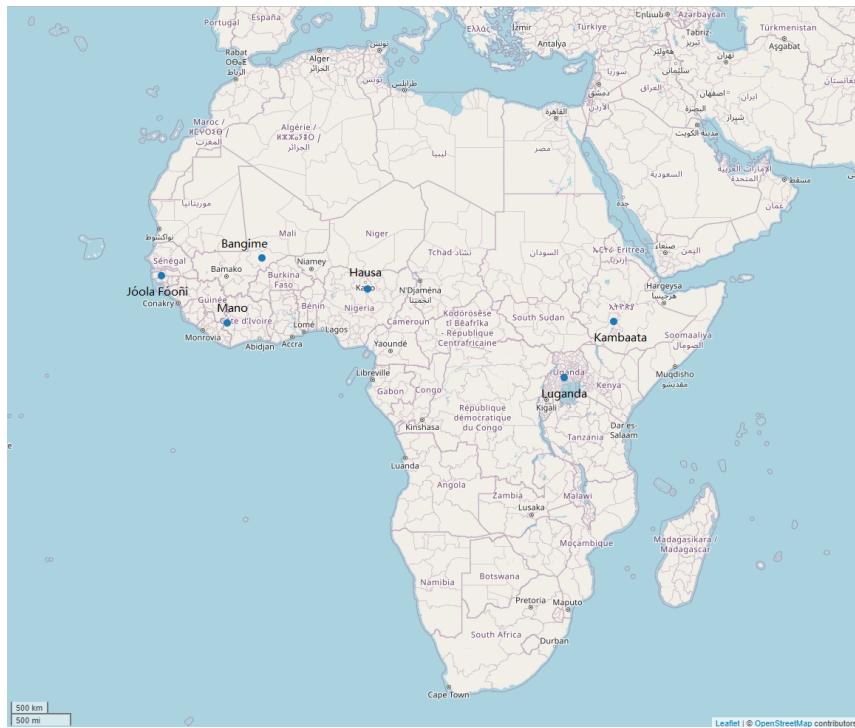
Unavoidably, finding language experts for such a big enterprise was challenging. Consequently, our sample is not completely balanced in terms of the number of contributions for each macroarea. However, this limitation is compensated by the quality of the data. Overall, the volume contains studies dedicated to the reflexive construction in 27 languages: 6 languages are from Africa (chapters 3–8, Figure 2), 6 languages are from Eurasia (9–14, Figure 3), 5 languages are from Paponesia (chapters 15–19, Figure 4), 4 languages are from Australia (chapters 20–23, Figure 5), 4 languages are from North America (chapters 24–27, Figure 6), and 3 languages are from South America (chapters 28–30, Figure 7).

¹The maps in this chapter and in the conclusion chapter have been elaborated with the package “lingtypology” for R (Moroz 2017), using the language coordinates in Glottolog (Hammarström et al. 2022). A special note must be made for Early Vedic and Yiddish. Regarding Early Vedic, the language was spoken between II and I millennium BCE in an area located between Afghanistan, northern Pakistan, and northern India, i.e. in the most north-western area of Indo-Aryan languages (see Witzel 2006 and Orqueda 2019 for discussion). Early Vedic is not present in Glottolog, while Sanskrit (a subsequent phase of the language) is located in India, where it still survives as a religious language. Consequently, we decided to use the coordinates of Nuristani Kalasha, an Indo-Aryan language spoken today in the area where Early Vedic was presumably spoken. As for Yiddish, the label in this map refers to Eastern Yiddish, as it is generally meant by scholars (see Luchina (2023 [this volume]) in this volume).



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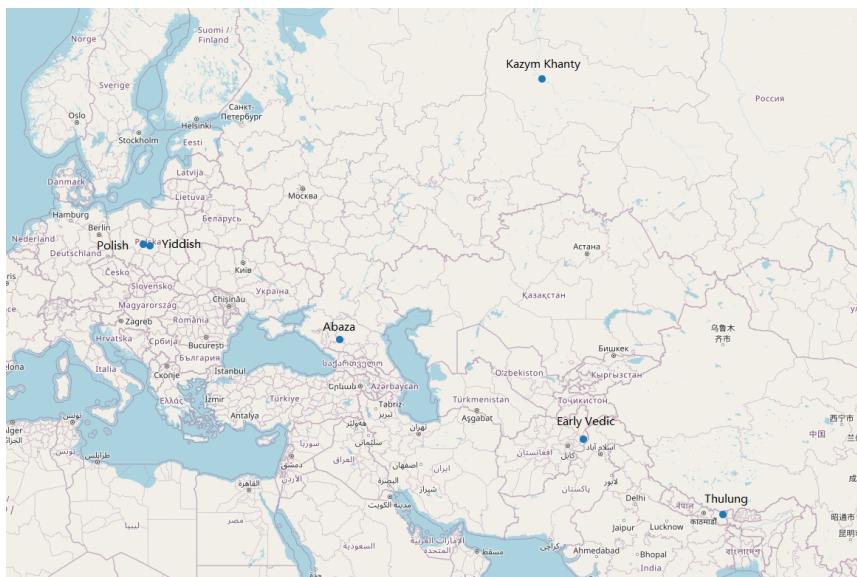
Figure 1: Languages represented in this volume



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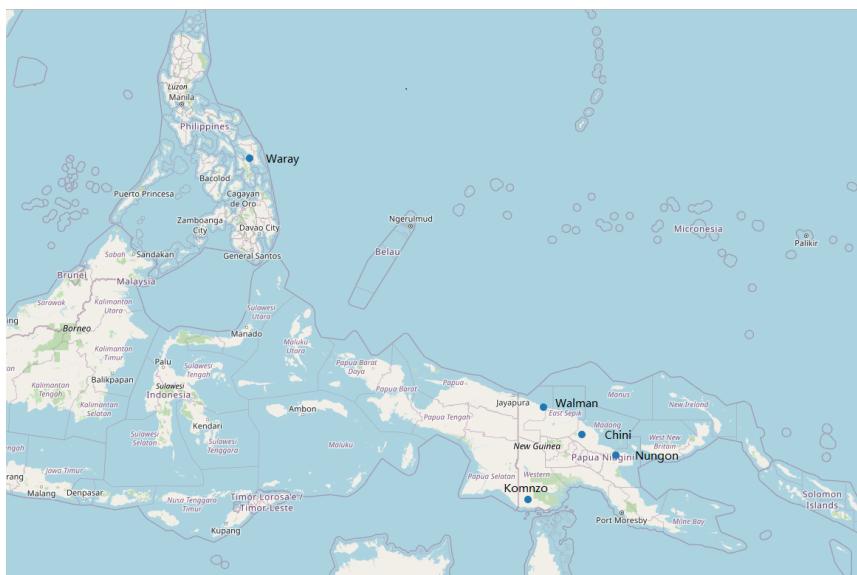
Figure 2: Languages of Africa represented in this volume

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Figure 3: Languages of Eurasia represented in this volume



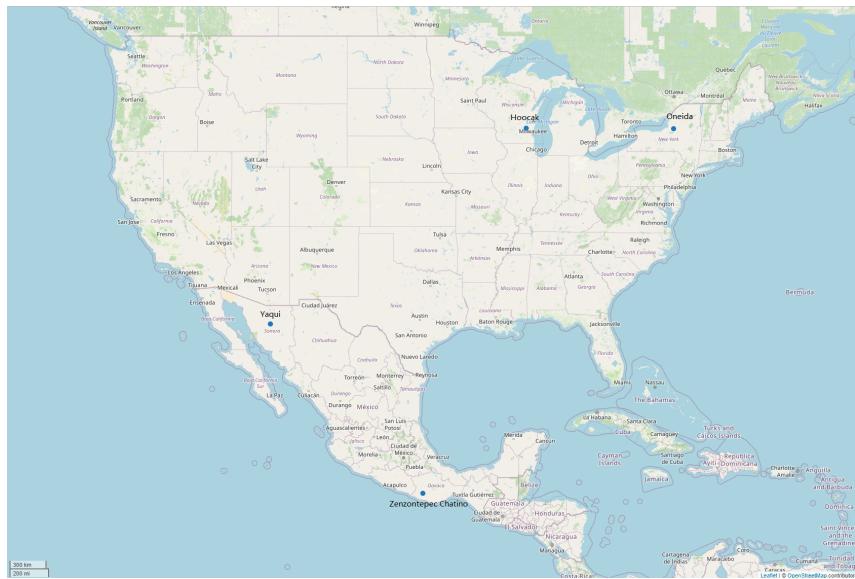
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Figure 4: Languages of Papuasia represented in this volume



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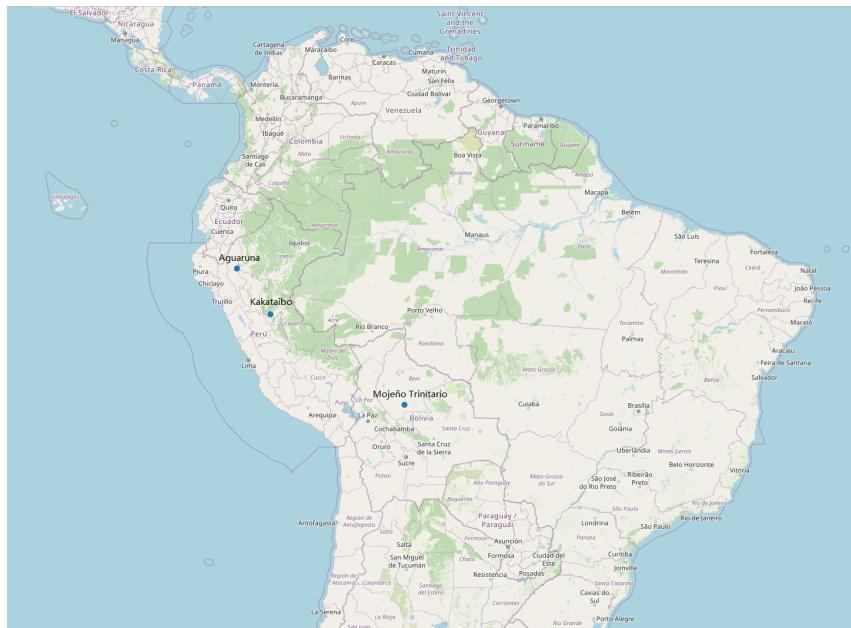
Figure 5: Languages of Australia represented in this volume



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Figure 6: Languages of North America represented in this volume

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Figure 7: Languages of South America represented in this volume

We were not fully consistent in terms of genealogical diversity in the macroareas. For instance, the African macroarea, in addition to the contributions on Mano (from the Mande family) and Bangime (isolate), contains two studies from the Atlantic-Congo family (one on Jóola Fóoni from the North-Central Atlantic branch and one on Luganda from the Volta-Congo branch), and two studies on languages from the Afro-Asiatic family (one on Hausa from the Chadic branch and one on Kambaata from the Cushitic branch). Given that Atlantic-Congo and Afro-Asiatic are among the most prominent language families in the world and that the investigated languages (i.e. Jóola Fóoni, Luganda, Hausa, and Kambaata) descend from different subbranches respectively, their presence does not affect the genealogical balance of the African macroarea drastically.

At first glimpse, the Australian macroarea presents a comparable situation. Among four contributions, two address the description of reflexive constructions from the same Pama-Nyungan family. The first is Kuuk Thaayorre, which belongs to the Paman branch, and the second is Warlpiri, which is part of Desert Nyungic. Nevertheless, the Australian macroarea slightly differs from the African one. Firstly, the Pama-Nyungan family strongly dominates this macroarea when compared to other language families. Moreover, the genealogical classification

of this family is controversial and subject to various discussions (see e.g. Dixon 1980, 2002 and Miceli 2015 for a summary of the debate). For these reasons, we were less rigorous in selecting languages for the Australian macroarea than in other cases. Hence, the presence of two studies from the same Pama-Nyungan family.

The language sample representing the Eurasian macroarea is slightly unbalanced as well. Initially, it contained four studies dedicated to four languages, each from a different family: Abaza (Abkhaz-Adyge), Kazym Khanty (Uralic), Polish (Indo-European, Slavic), and Thulung (Sino-Tibetan). However, the Eurasian sample was extended over time by the studies on Yiddish (Indo-European, Germanic) and Early Vedic (Indo-European, Indo-Aryan). Even though they derive from the same Indo-European family as Polish, we decided to include them in our volume as they are attractive at the linguistic level. Early Vedic is an ancient language whose data are based on religious texts and whose reflexive constructions have been widely discussed from a diachronic perspective (see e.g. Pinault 2001; Kulikov 2012; Orqueda 2019). Our intention was to verify whether the synchronically-based questionnaire by Janic & Haspelmath (2023 [this volume]) can be adapted to an ancient language with a closed corpus. Yiddish also presents interesting characteristics. Due to intense and direct language contact, it adopted the linguistic features of several languages, including German, Hebrew, Aramaic, Slavic, and Romance. According to Schladt (2000), overall, mechanisms of borrowing play an important role in the grammaticalization of reflexive strategies. Both studies thus enriched the volume by valuable insights into reflexive constructions and thereby supplying a better and more promising picture.

3 Aims of the volume

The larger part of earlier research investigating reflexivizers took the behavior of the English reflexive pronoun as a point of reference in the study of reflexive constructions. Based on high-quality data, this volume takes a broader perspective by providing a systematic description of reflexive constructions with different types of reflexivizers from genealogically and geographically diverse languages.

Generally speaking, the contributions confirm what is considered nowadays common knowledge about reflexive constructions, particularly pertaining to their form and function. However, they also highlight some interesting aspects related to the types of reflexivizers in a language, their possible number, and rich coexpression patterns (see Janic & Puddu 2023 [this volume]). These results open a new avenue for further research, as the questionnaire either has not covered all

the aspects related to the reflexive constructions yet or only touched on those that need a more thorough investigation such as introverted and extroverted distinction.

This volume will be of interest to typologists who seek to deepen the crosslinguistic research of reflexive constructions in the world's languages but also to descriptive and documentary linguists who want to investigate the concept of reflexive constructions in the language of their specialization. At a more advanced level, the volume also contributes to the theoretical debate on the quality of data used in comparative research, cross-fertilizing the mutual relationship between field linguistics and cross-linguistic research.

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1 Introducing the cross-linguistic comparison of reflexive constructions

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Chapter 2

Comparing reflexive constructions in the world's languages

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The past four decades have seen a lot of new research on reflexive constructions that goes far beyond the earlier literature, and a variety of technical terms have been used. The divergent frameworks have made some of this literature hard to access. This paper provides a nontechnical overview of the most important kinds of phenomena in the world's languages and offers a coherent conceptual framework and a set of cross-linguistically applicable technical terms, defined also in an appendix. I also explain other widely used terms that do not form part of the present conceptual system (defined in another appendix). The paper begins with a definition of the most basic term (*reflexive construction*) and then moves to types of reflexivizers (reflexive pronouns and reflexive voice markers), as well as syntactic concepts such as ranks and domains. I also briefly discuss obviative anaphoric pronouns and antireflexive marking. Finally, I introduce the distinction between discourse-referential and co-varying coreference. The general philosophy is that we will understand general questions about reflexive constructions (i.e. questions not restricted to the language-particular level) only when we know what is universal and what is historically accidental, so there is also an appendix that lists some possible universals of reflexive constructions.

1 Reflexive constructions

This paper starts out from the presupposition that the comparison of reflexive constructions in the world's languages must be based on a clear definition of the term REFLEXIVE CONSTRUCTION as a comparative concept, as well as a range of



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additional technical terms (summarized in Appendix B). I begin with the definition in (1), which I think is largely in line with current usage and is at the same time sufficiently clear for rigorous cross-linguistic comparison.

(1) Reflexive construction

- A reflexive construction is a grammatical construction
- (i) that can only be used when two argument positions of a clause require coreference
 - (ii) and that contains a special form (a reflexivizer) that signals this coreference.

Some examples of reflexive constructions are given in (2a–2c).

(2) a. Lithuanian

- Aš prausi-uo-s.*
I wash-1SG-REFL
'I wash (myself)'

b. French

- Asma₁ parle d' elle-même₁.*
Asma talks of her-REFL
'Asma talks about herself'

c. Malay (Austronesian; Cole et al. 2006: 25)

- Ahmat₁ tahu [Salmah₂ akan membeli baju untuk dirinya_{1/2}].*
Ahmat know Salmah FUT buy clothes for REFL.3SG
'Ahmat (M) knows that Salmah (F) will buy clothes for him/herself.'

In (2a) from Lithuanian, the washer and the washed must be the same person, and the verb shows a REFLEXIVE VOICE MARKER. In (2b) from French, the subject *Asma* and the REFLEXIVE PRONOUN *elle-même* must likewise be coreferential. By contrast, a NONREFLEXIVE PERSONAL PRONOUN like *elle* 'she' would give rise to a DISJOINT-REFERENCE interpretation here, indicated in the examples by a different subscript number (*Asma₁ parle d'elle₂* 'Asma talks about her'). Disjoint reference means that the pronoun is not coreferential with the subject, and does not even have overlapping reference. In (2c) from Malay, the form *dirinya* must be coreferential either with the subject of its minimal clause (*Salmah*) or with the subject of the matrix clause (*Ahmat*). The participant with which the anaphoric pronoun is coreferential is called its ANTECEDENT.

In the remainder of this paper, I will first discuss the two conditions of the definition in §1 further (§2–§3), before introducing a number of additional comparative concepts that are important for comparing subtypes of reflexive constructions (§4–§13). Along the way, I will illustrate the most important types of reflexive constructions from a wide range of languages, and I will mention a few generalizations.

The wider research programme in which this paper is embedded is the study of Human Language through the identification of common grammatical traits in the world's languages (Greenberg 1963, and much subsequent work). Importantly, this line of research does not aim to contribute to elegant language-particular analyses, let alone to descriptions of the speakers' mental grammars. When other linguists adopt very different perspectives in studying reflexive constructions, this is often motivated by additional goals (such as elegant description, mental description, or even the study of innate grammatical knowledge). Appendix A lists a number of proposed universals (primarily to illustrate the need for the technical terms developed throughout the paper), while Appendixes B and C contain lists of terms with definitions and some further discussion. The definitions are important in order to allow us to identify the common grammatical traits of the world's languages independently of innatist claims, and ideally, we would have standard definitions of many commonly used terms (Haspelmath 2021).

For other surveys of reflexive constructions in the world's languages, see Faltz (1977),¹ Geniušienė (1987), Huang (2000), Dixon (2012: Ch. 22), and Everaert (2013).

2 First condition: Coreference among two argument positions

Reflexive constructions express coreference between two clausal positions. These need not be expressed as overt arguments. In verb-marked constructions like Lithuanian *prausiuo-s* ('I wash', 2a above), there is only a single expressed argument which can be said to bear both semantic roles (agent and patient), and thus to represent both notional argument positions.

More generally, the antecedent of an anaphoric pronoun need not be overtly present but can be inferred from the context. This happens in languages where the subject participant need not be overt, as illustrated in (3).

¹This old dissertation is still very readable.

- (3) Polish (Janic 2023 [this volume])

Widziała siebie w lustrze.

she.saw self.ACC in mirror

'She saw herself in the mirror.'

There is no reason to assume that the subject is present in the syntax of languages like Polish, so the condition on coreference is best formulated in semantic terms, with respect to semantic participant positions rather than syntactic arguments (see also Jackendoff 1992).²

3 Second condition: A special form that signals coreference

The second condition mentioned in (1) is that reflexive constructions must contain a special form signaling coreference. Thus, the constructions illustrated in (4–5) are not regarded as reflexive constructions, even though they can only be used when there is coreference of two participants.

- (4) *He undressed.*

- (5) *She wants to sing.*

In (4), it is clear from the meaning of the verb and from the construction that the two participants of *undress* (the undresser and the undressed) are coreferential, and in (5), the animate participant of *want* (the wanter) and the participant of *sing* (the singer) are coreferential. But there is no special form that signals the coreference, so these are not reflexive constructions (see Giomi 2021: §3).³ (Below in §12 I say more about coreference constructions that are not reflexive constructions.)

²Note also that the coreference may be PARTIAL (e.g. *I exploit us*, Hampe & Lehmann 2013), or the antecedent may be SPLIT (see Volkova (2017) on situations like *Petja₁ showed Ivan₂ themselves₁₊₂ on the photo*, which is possible with one type of reflexive pronoun in Meadow Mari). The opposite of coreference is DISJOINT REFERENCE, which excludes partial or split coreference.

³Linguists have often found it useful to have different terms for grammatical meanings and corresponding grammatical markers or constructions, e.g. *recipient* vs. *dative*, *question* vs. *interrogative*, *sex* vs. *gender*, *time* vs. *tense*, *speech-act role* vs. *person*, *property concept* vs. *adjective*, *causal* vs. *causative* (Haspelmath 2021), and *mutual* vs. *reciprocal* (Haspelmath 2007). There are of course some authors who call cases like (4) "reflexive" (e.g. Reinhart & Reuland 1993), but I find it clearer to reserve the term *reflexive* to (constructions with) special forms that signal coreference (cases like 4 may be called "unmarked autopathic verbs"; see §8).

4 Coreference within the clause can be expressed in other ways

Reflexive pronouns like French *elle-même* and English *herself* have often been discussed in the general context of ANAPHORA, i.e. the use of linguistic forms or constructions to signal coreference within the discourse or within a clause. But reflexive pronouns are not the only way in which anaphoric reference can be expressed. All languages also have nonreflexive anaphoric pronouns like English *he/she/they*, whose use is also often syntactically conditioned.

Nonreflexive anaphoric pronouns may often refer to participants in the non-linguistic context (as in 6a), and they may be coreferential with participants in the discourse (as in 6b).⁴

- (6) a. (watching a politician₁ talk:) *I disagree with her₁.*
- b. *Angela Merkel₁ has been chancellor for too long. Many people think that she₁ should go.*

But in addition, we often find syntactic conditions on anaphoric pronouns that have interested many syntacticians since the 1960s (e.g. Langacker 1969). In many or most languages, a nonreflexive anaphoric pronoun in object or oblique position cannot be coreferential with the subject of its clause, as can be illustrated from English in (7).⁵

- (7) a. * *Pedro₁ admires him₁.*
- b. * *Angela Merkel₁ was astonished by her₁.*

Instead, English must use a special set of REFLEXIVE PRONOUNS, i.e. anaphoric pronouns that are specialized for coreferential use within a clause. But other languages can use their nonreflexive pronouns also for coreference with the subject.⁶ This is well-known for Old English, (8), and the same has been reported for several creole languages (e.g. Haitian Creole in 9) and for several Austronesian languages (e.g. Jambi Malay in 10) (Huang 2000: 222 gives a longer list of such languages).

⁴There are interesting pragmatic conditions on such EXOPHORIC (6a) and ENDOPHORIC (6b) uses of personal pronouns (cf. Ariel 1990, 2001), but for reflexive constructions, they play no role, and only grammatical conditions on anaphora are considered in the present paper.

⁵Anaphoric pronouns like English *him/her* are also called OBVIATIVE (§10).

⁶Note that in this paper, the term *subject* is used in the sense 'S- or A-argument', and *object* in the sense 'P-argument or R-/T-argument' (cf. Haspelmath 2021).

- (8) Old English (König & Vezzosi 2004: 232)
þa behydde Adam₁ hine_{1/2}.
then hid Adam him
'Then Adam hid himself' OR: 'Then Adam hid him.'
- (9) Haitian Creole (French-based Creole; Déchaine & Manfredi 1994: 203)
Yo wè yo.
they see they
'They saw them.' OR: 'They saw themselves.' (OR: 'They saw each other.')
- (10) Jambi Malay (Austronesian; Cole et al. 2015: 147)
Dio₁ cinto dio_{1/2}.
he love he
'He loves him.' OR: 'He loves himself.'

Such anaphoric forms are not considered reflexive pronouns (and the constructions are not reflexive constructions) because they can also be used when there is no coreference within the clause.

Additionally, ordinary 1st and 2nd person pronouns can often be used subject-coreferentially, as in German in (11). And in some languages, the same nominal can be repeated with identical reference in the same sentence, as has been reported for Zapotec of San Lucas Quiaviní in (12).

- (11) German
Gestern habe ich₁ mich₁ im Fernsehen gesehen.
yesterday have I me on television seen
'Yesterday I saw myself on television.' (Lit. 'I saw me.')
- (12) San Lucas Quiaviní Zapotec (Otomanguean, Mexico; Lee 2003: 84)
R-yu'lààa'z Gye'eihlly Gye'eihlly.
HAB-like Mike Mike
'Mike likes himself.' (Lit. 'Mike likes Mike.')

Unlike (8–10), these sentences are unambiguously subject-coreferential, but they are not reflexive constructions either, because they do not involve any special forms.

In the literature, following the tradition of Reinhart (1976), Reinhart (1983b), and Chomsky (1981), the syntactic conditions on clause-internal coreference are often treated under the heading of "binding" (using a term borrowed from mathematical logic), and there is a substantial and highly complex literature in this

tradition (e.g. Everaert 2003; Büring 2005; Truswell 2014).⁷ For the purposes of cross-linguistic comparison, it seems best to avoid the term “binding” and to talk about COREFERENCE (for anaphoric relations in the broadest sense) and SUBJECT-COREFERENTIAL uses of anaphoric forms (for anaphoric relations between the subject and an anaphoric pronoun).⁸

5 Types of reflexivizers

Reflexive constructions always include some special form that signals the impossibility of the disjoint-reference interpretation. Such forms are called REFLEXIVIZERS here, and three main types are distinguished: REFLEXIVE NOMINALS (§5.1), REFLEXIVE VOICE MARKERS (§5.2), and REFLEXIVE ARGUMENT MARKERS (§5.3). These are defined and exemplified in this section (see Giomi 2021: §2 for a similar recent taxonomy). In the final subsection (§5.4), I briefly mention other kinds of reflexive constructions which do not fall into the three main types.

5.1 Reflexive nominals (or pronouns)

The most prominent type of reflexivizer is what would ideally be called REFLEXIVE NOMINAL, illustrated in (13). Such forms are often called *reflexive pronouns*, and some of them are sometimes called “reflexive nouns”.

- (13) a. English
They criticized themselves.
- b. Basque (Evseeva & Salaberri 2018: 400)
Geu-re buru-a engaina-tzen d-u-gu.
 we-GEN head-DEF deceive-IPFV 3.ABS-TR-1PL.ERG
 ‘We deceive ourselves.’

⁷Binding is typically defined as syntactic coindexing of two elements X and Y when X c-commands Y. Note that “bound” elements in this sense may or may not be reflexive pronouns, and may or may not have a co-varying interpretation (involving (semantic) BOUND VARIABLE ANAPHORA, §13). Coreferential forms may or may not involve syntactic binding, and co-varying interpretations may or may not involve syntactic binding. The relationship of syntactic binding to coreference, to reflexive and nonreflexive pronouns, and to pronoun interpretation is thus quite indirect (and often unclear, given the problems with determining c-command that are mentioned in §7). None of these problems exist when one avoids the term *binding*.

⁸It should be noted that the term *coreference* has also been used more narrowly, for discourse coreference excluding co-varying interpretations (as in *Every woman₁ loves her₁ dog*); for more on the two subtypes of coreference, see §13.

- c. Egyptian Arabic, (Afro-Asiatic)
Šaaf-it nafsa-ha.
saw-3SG.F self-3SG.F.POSS
'She saw herself.'
- d. Modern Greek (Everaert 2013: 202)
O Pétrοs aghapái ton eaf्लó tu.
the Petros loves DEF self 3SG.POSS
'Petros loves himself.' (Lit. 'Petros loves his self.')
- e. Tukang Besi (Austronesian; Donohue 1999: 418)
O-pepe-'e na karama-no te ana.
3.REAL-hit-3.OBJ NOM self-3.POSS CORE child
'The child hit himself.'

The term *reflexive nominal* emphasizes that in many languages, these forms behave like full nominals, e.g. in that they can take a definite article (as in Basque, 13b), an adposessive person index (as in Egyptian Arabic, 13c), or both (as in Modern Greek, 13d).

The term REFLEXIVE NOMINAL would be ideal for these forms because what they share is that they can occur in the regular object position (as P-argument, as in 13a–13e) and as adpositional complements, as in (14a–14b). But since the term *reflexive pronoun* is also very widespread and unambiguous, I use the two terms interchangeably.

- (14) a. English
They talked about themselves.
- b. Basque
Bere buruari buruz hitz egin zuten.
their heads about talk do AUX.3PL.PST
'They talked about themselves.'

Moreover, these forms can normally occur in isolation, e.g. in elliptical answers (*Who did they talk about? Themselves*). In this regard, reflexive nominals are like full nominals, and crucially distinct from person indexes (Haspelmath 2013), which are bound (i.e. do not occur in isolation) and usually cannot occur equally as objects and as adpositional complements. More on subtypes of reflexive nominals and their properties will be said below in §6.

5.2 Reflexive voice markers

A reflexive voice marker is a verbal affix that indicates the coreference of two participants of a verb. While this is not logically necessary, it is in fact always an object participant that is coreferential with the subject participant. Most often, the reflexive voice marker occurs on the verb stem, as in (15a–15d).

- (15) a. Turkish (Turkic)
kurula-n-di-m
 dry-REFL-PST-1SG
 'I dried myself'
- b. Thulung (Sino-Tibetan; Lahaussois 2016: 54)
Memma tha-si-m sintha koŋja je.
 then hide-REFL-SUFF night only come.out
 'Then he hides (himself) and only comes out at night.'
- c. Hebrew (Afro-Asiatic; Reinhart & Siloni 2005: 390)
Dan hit-raxec.
 Dan REFL-washed
 'Dan washed (himself).'
- d. Kolyma Yukaghir (Yukaghir, Siberia; Maslova 2003: 227)
Tudel met-juø-j.
 he REFL-see-3SG.INTR
 'He is looking at himself.'

But occasionally, the reflexive voice marker is cumulated with (=expressed as the same marker as) a person marker, as in Modern Greek, (16).

- (16) Modern Greek
 - a. *xteníz-ome*
 comb-1SG.REFL
 'I am combing (myself, my hair)'
 - b. *xteníz-ese*
 comb-2SG.REFL
 'you are combing (yourself, your hair)'

Finally, the reflexive voice marker may occur in a peripheral position, outside of a tense affix, as in Panyjima (17a), and additionally outside a subject number affix, as in Russian (17b) (and in Lithuanian, as in 2a above).⁹

⁹A pattern of this type also exists marginally in English, with the prefix *self-* (e.g. *she self-medicates*).

- (17) a. Panyjima (Pama-Nyungan; Dench 1991: 160)

Ngatha wirnta-rna-pula jina.

1SG.NOM cut-PST-REFL foot

'I cut myself in the foot.'

- b. Russian

My my-l-i-s'.

we wash-PST-PL-REFL

'We washed (ourselves).'

In many languages with reflexive voice markers, these are not as general as typical inflectional markers, and they are often regarded as derivational, because they may be restricted and unproductive. Verbs with reflexive voice markers are therefore often called REFLEXIVE VERBS.

Reflexive voice markers are not always easy to distinguish from reflexive argument markers, which are discussed next.

5.3 Reflexive argument markers

In some languages, a reflexive form is very similar to object person indexes in that it occurs in the same paradigmatic slot as the person index and cannot cooccur with a person index of the same role. Some examples are given below, (18–20), where a nonreflexive 3rd person index is contrasted with a reflexive person index.

- (18) French

- a. *Il la voyait.*

he 3SG.F saw

'He saw her.'

- b. *Il se voyait.*

he REFL saw

'He saw himself.'

- (19) Swahili (Atlantic-Congo)

- a. *a-li-m-kata*

3SG-PST-3SG.OBJ-cut

'she cut him'

- b. *a-li-ji-kata*

3SG-PST-REFL-cut

'she cut herself'

- (20) Abkhaz (Abkhaz-Adyge; Hewitt 1979: 77, 105)

- a. *bə-z-bə-yt'*
2SG.OBJ-1SG.SBJ-see-FIN
'I see you'
- b. *lçə-l-š-we-yt'*
REFL.F-3SG.F.SBJ-kill-DYN-FIN
'she kills herself'

Person indexes like the French proclitic (or prefix) *la-*, the Swahili prefix *m-*, and the Abkhaz prefix *bə-* are crucially different from independent personal pronouns in that they cannot occur in isolation, but are bound to the verb (or occur in a special slot for second-position clitics) (see Haspelmath 2013). They are thus not nominals (=reference-performing expressions that can occur in isolation), and they contrast with full nominals and independent personal pronouns. The forms *se*, *ji-* and *lçə-* in the examples above are different from the voice markers in §5.2 in that they occur in the same slot and in complementary distribution with person indexes, so they can be treated as argument indexes, even though they do not (necessarily) vary for person. The Abkhaz reflexive argument index does vary for person (*şçə-s-š-we-yt* 'I kill myself'), but the Swahili prefix *ji-* does not (*ni-li-ji-kata* 'I cut myself'),¹⁰ and the French *se* occurs only in the 3rd person.¹¹

Some authors have claimed, especially for French and other Romance languages, that constructions such as *il se voit* should be treated as intransitive (e.g. Reinhart & Siloni 2005: §2.1; Creissels 2006: 27–28), and that French *se* should not be regarded as an object clitic, but as a voice marker. This is based on a number of additional characteristics of the construction that go beyond the simple form paradigm (e.g. their behaviour in verb-subject and causative constructions) and can thus hardly be used in cross-linguistic comparison.¹² But it needs to be admitted that the criterion of "occurrence in the same slot" may not always be clearly applicable (e.g. when different object indexes occur in different slots).

¹⁰See also Déchaine & Wiltschko (2017a: §4) on *zvi-* in Shona (another Bantu language), which works very similarly.

¹¹French allows 1st and 2nd person object indexes to be used subject-coreferentially (e.g. *je me vois* 'I see myself'). This seems to be rare in the world's languages: Paradigms with subject and object indexes typically have gaps in all the coreferential paradigm slots (cf. Hampe & Lehmann 2013).

¹²Doron & Rappaport Hovav (2009) provide a rich set of arguments against Reinhart & Siloni's (2005) claims. Their view, that French *se* should be analyzed as an "anaphor", is more in line with the classification chosen here. But it should be kept in mind that I do not treat typological classifications as "analyses", and that "arguments" which go beyond the definitional properties are not relevant for the classification.

5.4 Other types of reflexive constructions

The great majority of reflexive constructions that have been reported in the literature and that have been called “reflexive” belong to one of the three types seen so far, and the great majority of languages have been reported to have either reflexive nominals or reflexive voice markers or both. But there are other construction types which are attested occasionally, and which are mentioned here briefly.

The first case is a construction in which it is not the lower-ranked anaphoric form that indicates the coreference, but the subject antecedent. According to Bowden (2001: 166), Taba has “an invariant reflexive particle *do* which occurs as an attribute of the Actor nominal, and which indicates that the Actor of the verb is coreferential with the Undergoer of the same verb”. This is illustrated in (21).

- (21) Taba (Austronesian, Indonesia; Bowden 2001: 166)

- a. *I do n=wet i.*
3SG REFL 3SG=hit 3SG
'He hit himself.'
- b. *Yak do k=alcoma-k yak surat.*
1SG REFL 1SG=send=APPL 1SG letter
'I am sending myself a letter.'

If this construction were restricted to personal pronoun subjects, it would be a reflexive pronoun that is an exception to the rank scale generalization (discussed below in §7), but Bowden's description does not report such a restriction.

A related construction uses a kind of “bipartite reflexive pronoun” which bears the flagging of both the antecedent and the position in which the anaphoric pronoun occurs. This has been documented for a number of Dagestanian languages, e.g. Avar, (22).

- (22) Avar (Nakh-Dagestanian; Testelets & Toldova 1998: 45)

- ſali-ca žin-ca-go ži-w-go l"uk"-ana.*
Ali-ERG self-ERG-EMPH self-M-EMPH hurt-AOR
'Ali hurt himself.'

Here the first part of the bipartite element (*žin-ca-go ži-w-go*) bears the ergative case of the antecedent nominal (the subject), and the second part is in the absolute case, as is appropriate for the role of the pronoun. This can probably be regarded as a type of reflexive pronoun, though the case-form of the first part

links it closely to the antecedent, and thus makes it look somewhat like the case of Taba mentioned in the preceding paragraph.

In some languages, an adverbial expression (meaning ‘alone’ or ‘again’) that is not closely associated with an argument expression can indicate coreference of the object with the subject. This might be called a REFLEXIVE ADVERB. An example comes from an Austronesian language in (23).

- (23) Fagauvea (Polynesian; Moyse-Faurie 2008: 138)

E hage matea ie ia a cica.
IPFV alone admire ABS 3SG ART dad
'Dad admires himself.'

Finally, I should briefly mention LOGOPHORIC PRONOUNS, which indicate coreference between a participant of an embedded clause and the subject (or another prominent participant) of the matrix clause. Consider the contrast in (24a–24b), where coreference is indicated by *inyemeñ*, and disjoint reference by the nonlogophoric pronoun *woñ*.

- (24) Donno So (Dogon; Culy 1994: 1056)

- a. *Oumar [Anta inyemeñ waa be] gi.*
Oumar Anta LOGOPHOR.ACC seen AUX said
'Oumar₁ said that Anta₂ had seen him₁.'
- b. *Oumar [Anta woñ waa be] gi.*
Oumar Anta him.ACC seen AUX said
'Oumar₁ said that Anta₂ had seen him₃'

Such pronouns are not normally treated as reflexive pronouns, though by the definition that I have given so far, they should be regarded as reflexive pronouns (and it would be odd to add an extra condition to the definition specifically to exclude them). Perhaps their special treatment in the literature is entirely due to the fact that the research tradition has been focused on West African languages.

6 Types of reflexive nominals

The first of the three main types of reflexivizers that we saw earlier, reflexive nominals (§5.1), shows a lot of internal diversity, so we can distinguish a number of salient subtypes here.

6.1 Nouns with adposessive person forms (=possessive-indexed reflexive nouns)

In many languages, the reflexive nominal looks like a noun that takes adposessive person forms, so that the literal translation is ‘my self’, ‘your self’, ‘his self’, and so on. These nouns sometimes have plural forms when the antecedent is plural, i.e. ‘our selves’, ‘your selves’, ‘their selves’. Some examples are given in Table 1 (for Hausa, see Newman 2000: 522; for Chalcatongo Mixtec, see Macaulay 1996: 144–145; for Finnish, see Karlsson 1999: 137; for Hebrew, see Glinert 1989: 67).

Table 1: Examples of possessive-indexed reflexive nouns

	Modern Greek	Hausa	C. Mixtec	Finnish	Hebrew
1SG	<i>ton eaftó mu</i>	<i>kāin-ā</i>	<i>máá=rí</i>	<i>itse-ni</i>	<i>facm-i</i>
2SG	<i>ton eaftó su</i>	<i>kān-kà</i>	<i>máá=ro</i>	<i>itse-si</i>	<i>facm-exa/-ex</i>
3SG	<i>ton eaftó tis</i>	<i>kān-sà</i>	<i>máá=ñá</i>	<i>itse-nsä</i>	<i>facm-o/-a</i>
1PL	<i>ton eaftó mas</i>	<i>kān-mù</i>		<i>itse-mme</i>	<i>facm-enu</i>
2PL	<i>ton eaftó sas</i>	<i>kān-kù</i>		<i>itse-nne</i>	<i>facm-exem/-exen</i>
3PL	<i>ton eaftó tus</i>	<i>kān-sù</i>		<i>itse-nsä</i>	<i>facm-am/-an</i>

In Georgian, the possessive person form is not a bound form (*čemi tavi* ‘myself’, *šeni tavi* ‘yourself’), and it is not obligatory (Amiridze & Leuschner 2002). Perhaps one can say in general that when the possessive person form is a bound form as in Table 1, it is obligatory, but when it is a free form, it may or may not occur.

Faltz (1977) called such noun-like reflexive forms “head reflexives”, because they can be the “head” of a reflexive nominal.¹³

6.2 Noun-like forms without adposessive indexes

In languages lacking adposessive person indexes, reflexive nouns are generally not person-marked. They are noun-like primarily in that they can occur with adpositions and/or case-markers. Examples come from Japanese (*jibun*) and Hindi-Urdu (*apne*) in (25a–25b). For the Ute form *nanəs*, Givón’s description only gives

¹³This term is not ideal, for two reasons: (i) reflexive nouns often come from body-part nouns meaning ‘head’ (see §11.2 below), so it may be misinterpreted, and (ii) the syntactic notion of “head” is not well-defined (it may be unclear whether a reflexive-marking form is a “head” or not).

examples of object use, so it is less clearly noun-like, (25c) (and could be said to resemble the voice prefixes in 15c–15d above).

- (25) a. Japanese (Hirose 2018: 380)
Ken wa jibun o hihanshi-ta.
 Ken TOP self ACC criticize-PST
 ‘Ken criticized himself.’
- b. Hindi-Urdu (Indo-European; Davison 2001: 47)
Sita₁-ne Raam₂-ko [apne_{1/2}-ko dekh-ne-ke] liye majbuur kiya.
 Sita-ERG Ram-DAT self-DAT look-INF-GEN for force did
 ‘Sita (F) forced Ram (M) to look at her/himself.’
- c. Ute (Uto-Aztecán; Givón 2011: 237)
Naneš p̥unikya-qhay-’u.
 self see-ANT-3SG
 ‘She saw herself.’

6.3 Self-intensified anaphoric pronouns

In some languages, reflexive nominals are etymologically made up of personal pronouns combined with self-intensifiers (i.e. forms that are used like English *himself/herself/themselves*, as in *Is the queen coming herself?*). Examples (26a–26b) illustrate this point.

- (26) a. Irish (Nolan 2000: 36)
Chonaic na cailíni iad féin.
 see.PST the girls them self
 ‘The girls saw themselves.’
- b. Mandarin Chinese (Tang 1989: 98)
Zhangsan ai ta-ziji.
 Zhangsan love him-self
 ‘Zhangsan loves himself.’

An example from French (*Asma parle d'elle-même*) was seen earlier in (2b), and an example from Malayalam is seen below in (40a). Self-intensifiers are often closely related to reflexive nominals (König & Siemund 2000; König et al. 2005), and I will say a little more about them in §11.2.

6.4 Personal pronouns with other reinforcements

Reflexive nominals may also be made up from personal pronouns combined with other reinforcing elements, (27–29).

- (27) Tok Pisin (Indo-European; Smith & Siegel 2013)
Em go na em kilim em yet.
 he go and he kill him EMPH
 ‘He went and killed himself.’
- (28) Kikongo-Kituba (Bantu; Mufwene 2013)
Bo bula bo mosi.
 they hit them one
 ‘They hit themselves.’
- (29) Fijian (Austronesian; Park 2013: 775)
O Josesē ā digi-taki koya gā.
 DET Josesē PST choose-TR him EMPH
 ‘Josesē voted for himself’

6.5 Reflexive pronominoids

In some languages, reflexive nominals are similar to independent personal pronouns in that they not only lack noun-specific features like articles and adposessive person indexes, but also share idiosyncratic properties of personal pronouns. This is clearest in western Indo-European languages such as Slavic and Germanic. Table 2 shows both a personal pronoun [you.SG] and the reflexive pronoun in Polish and Icelandic.

Table 2: Examples of personal pronouns and reflexive pronominoids

	Polish ‘you’	Polish ‘self’	Icelandic ‘you’	Icelandic ‘self’
NOM	<i>ty</i>	—	<i>pú</i>	—
GEN	<i>ciebie</i>	<i>siebie</i>	<i>þín</i>	<i>sín</i>
DAT	<i>tobie</i>	<i>sobie</i>	<i>þér</i>	<i>sér</i>
ACC	<i>ciebie</i>	<i>siebie</i>	<i>þig</i>	<i>sig</i>

The inflectional patterns are so similar that there is no question that the reflexive pronouns belong to the same paradigm as the personal pronouns. But it

should be noted that such REFLEXIVE PRONOMINOIDs are apparently quite rare in the world's languages.¹⁴

Another language which has reflexive pronominoids, in a much richer way, is Ingush (a Nakh-Dagestanian language of Russia; Nichols 2011: §9.1). A small part of the paradigm is listed in Table 3.

Table 3: Personal pronouns and reflexive pronominoids in Ingush

	1SG	1SG.REFL	2SG	2SG.REFL	3PL	3PL.REFL
NOM	so	sie	hwo	hwie	yzh	shoazh
GEN	sy	sei	hwa	hwaai	caar	shoi
DAT	suona	seina	hwuona	hwaaina	caana	shoazhta
ERG	aaz	eisa	wa	waaixa	caar	shoazh

7 The rank of antecedent and reflexive pronoun

In this and the next few sections, we will consider syntactic conditions under which reflexive pronouns can be used, as well as some technical terms that are associated with these conditions.

According to the definition given in (1), a reflexive pronoun must occur in the same clause as its antecedent, possibly in a subordinate clause that belongs to the same clause (i.e. it need not occur in the same minimal clause).¹⁵ However, there is generally an additional syntactic restriction: The antecedent must be a subject of the same clause or of a superordinate clause. Thus, (30a) with a subject antecedent is possible, while (30b) is not possible.

- (30) a. *My friend praised herself.*

¹⁴I deliberately introduce the strange term *reflexive pronominoid* here in order to highlight the fact that such forms are unusual, even though they are very familiar to many linguists from European languages (Latin also has such pronominoids). Using the term *pronoun* for the unusual forms in contrast to *noun* for the forms in §6.2 would not have the same effect. (From §7 onwards, I will use the term *reflexive pronoun* for any kind of reflexive nominal, because this term is more familiar from the literature.)

¹⁵Thus, the antecedent and the reflexive pronoun need not be CLAUSEMATES: Clausemates are elements occurring in the same minimal clause (where a MINIMAL CLAUSE is a clause that does not contain a subordinate clause). As will be seen in §9, reflexive pronouns need not occur in the same minimal clause. I could have said *sentence* instead of *clause* here, but the difference does not matter in the present context (a sentence is a maximal clause, and maximality is irrelevant in the present context).

- b. * *Herself* praised my friend.

And in (31), the adposessive reflexive pronoun must be coreferential with the subject, not with the dative object.

- (31) Russian

*Ona₁ dala bratu₂ svoj_{1/*2} zont.*
she gave brother.DAT self's umbrella
'She₁ gave her₁ (NOT: his₂) umbrella to her brother₂'

In some languages (such as English), the conditions are less strict, in that it is additionally possible for the antecedent to be the object, and for the reflexive pronoun to be an oblique argument, as illustrated in (32a). But the opposite is impossible, as seen in (32b).

- (32) a. *Jane told James about himself*.
b. * *Jane told himself about James*.

To describe the difference between Russian *svoj* and English *himself*, we say that *svoj* is SUBJECT-ORIENTED, while *himself* does not show this restriction. (Actually, there should be a special term for reflexive pronouns like *himself*, because most reflexive pronouns seem to be subject-oriented, and the English case is apparently unusual)

In some languages, the antecedent may be in the matrix clause and the reflexive pronoun in the embedded clause, as illustrated by (33). (More such examples will be seen in §9 below).

- (33) Japanese (Kuno & Kaburaki 1977: 635)

Taroo-wa₁ [Hanako-ga zibun-ni₁ kasi-te kure-ta] okane-o
Taro-TOP Hanako-NOM self-DAT lend-CVB give-PST money-ACC
tukat-te simat-ta.
spend-CVB end.up-PST

'Taro has spent all the money that Hanako had lent him.'

Again, the reverse situation (with the reflexive *zibun* in the matrix clause and the antecedent in the embedded clause) would not be possible here.

While there is no systematic cross-linguistic research, it appears from the rich literature on many different languages that given the rank scale in (34),¹⁶ almost

¹⁶A scale of this kind was proposed by Pollard & Sag (1992: 266), but they only discuss English. Other authors that have proposed similar rank scales are Bresnan (2001: 212) and Van Valin & LaPolla (1997: §7.5), and yet others have proposed to explain the restrictions in terms of a semantic role scale (Jackendoff 1972: Ch. 4) or a in terms of a case scale (Kiss 1991). None of these language-particular proposals are incompatible with the cross-linguistic claim of (33).

all languages restrict the relation between the antecedent and the reflexive pronoun in such a way that (35) is observed.

- (34) Rank scale of syntactic positions
subject > object > oblique > within nominal, within embedded clause
- (35) Antecedent–reflexive asymmetry
The antecedent must be higher on the rank scale of syntactic positions than the reflexive pronoun.

Note that this additional restriction is not definitional, but is an empirical generalization. The reason we can be fairly confident that (35) is true is that a violation of (35) would be very salient, and linguists would have discussed such cases more often. Forker (2014) discusses a number of potential reflexive pronouns in subject position that have been mentioned in the literature, but she does not find many clear instances. A fairly clear exception to (35) is found in Georgian, as illustrated in (36).

- (36) Georgian (Kartvelian; Amiridze 2003)
Šen-ma tav-ma gac'ama (šen).
 your-ERG head-ERG it.tormented.you you.NOM
 'It was yourself that tormented you.'

In most languages, the occurrence of reflexive pronouns is actually still more restricted than is implied by (34–35), though the various language-particular regularities are difficult to generalize over, and nobody has tried to compare all the languages studied so far in a comprehensive way. Since Chomsky (1981) and Reinhart (1983b), it has often been thought that a notion of “c-command” is necessary to describe the occurrence of reflexive pronouns (and nonreflexive personal pronouns) in English, and it has been assumed without much argument that such a notion is universally applicable. However, even for English, c-command fails in many cases (e.g. Barss & Lasnik 1986; Pesetsky 1987; Bruening 2014), and many of the proposals in the literature are highly speculative.¹⁷ The general usefulness of “c-command”, while widely assumed by authors working in the Reinhart-Chomsky tradition, is therefore far from established knowledge, and even for particular languages, descriptions in terms of rank scales may be preferable (e.g. Pollard & Sag 1992).

¹⁷Many authors have proposed modifications of the constituent structure in order to accommodate recalcitrant cases, e.g. Reinhart (1983a: 81), Pesetsky (1987), and, most blatantly, Larson (1988) (as discussed and criticized by Culicover & Jackendoff 2005: §2.1.3).

In addition to the contrast between subjects, objects and obliques in (34), many languages also allow experiencers which are objects or obliques to be antecedents of reflexive pronouns, as illustrated in (37) from Italian.

- (37) Italian (Belletti & Rizzi 1988: 312)

Questi pettegolezzi su di sé preoccupano Gianni più di ogni altra cosa.
these rumours about of himself worry Gianni more than any other thing

‘These rumours about himself worry Gianni more than anything else.’

This is also possible in English to some extent (Reinhart 1983b: 81; Pesetsky 1987: 127), and in many other languages. These cases show that the rank scale in (34) (let alone a notion of c-command) is not sufficient to account for the distribution of reflexive pronouns.

8 Domains: Autopathic, oblique and adposessive reflexive constructions

When the form that marks the reflexive construction is a reflexive pronoun, there are often interesting variations with respect to the ANTECEDENT DOMAIN (often called “binding domain”), i.e. the “syntactic distance” between the antecedent and the reflexive nominal. In this section, I distinguish between an autopathic domain, an oblique domain, and an adposessive domain, because these are the most important distinctions. In the next section (§9), we will see domains going beyond the minimal clause.

The AUTOPATHIC DOMAIN is the relation between the subject and the object (or the A-argument and the P-argument) in a monotransitive clause, as in *She saw herself; He painted himself; They hit themselves*. This is Faltz’s (1977: 3) “archetypal” reflexive context, Kemmer’s (1993: 41) “direct reflexive” situation, and it describes what Reinhart & Reuland (1993) call “reflexive predicates”. We need the new term *autopathic* for this domain, because the term *reflexive* is generally used in the wider sense of §1, and because this domain is so important that it deserves its own label.¹⁸ It appears that in most of the world’s languages, reflexive voice markers are exclusively used in the autopathic domain. Moreover, some

¹⁸The Greek term for ‘reflexive’ is *autopathēs*, deriving from *auto-* ‘self, same’ and *path-* ‘patient’ (i.e. literally it means ‘domain in which the patient is the same’). The term *autopathic* in this sense is thus very transparent etymologically.

languages have both a short reflexive pronoun and a long reflexive pronoun, and in such cases, the longer pronoun tends to be preferred (or required) in the autopathic domain. This is apparently due to the fact that coreference is particularly unlikely in this domain, at least with extroverted verbs (König & Vezzosi 2004; Haspelmath 2008).

The OBLIQUE DOMAIN refers to the relation between the subject and an oblique-marked participant of the same minimal clause. In this domain, some languages can use a nonreflexive pronoun, e.g. French, (38), and English, (39).

- (38) French

Pierre est fier de lui.

'Pierre is proud of him/of himself.'

- (39) English

a. *Jane saw a snake near her/near herself.*

b. *John left his family behind him (*himself).* (Kiparsky 2002: 43)

The precise conditions vary (in a complicated way, cf. Zribi-Hertz 1995 for French), but the fact that the anaphoric pronoun is an oblique argument (rather than a direct object, or P-argument) seems to play an important role in a number of languages.¹⁹ Another language that is similar to French, (38), and English, (39), is Malayalam, (40), where the simple reflexive pronoun *taan/tann-* cannot be used in an autopathic situation (which requires the complex form *awan- tanne*), but can be used when the reflexive is in an oblique position.

- (40) Malayalam (Dravidian; Jayaseelan 2000: 121, 126)

a. *Raaman awan-e tanne aṭiccu.* (**Raaman tann-e aṭiccu.*)

Raman he-ACC self hit

'Raman hit himself'

b. *Raaman tan-te munn-il oru aana-ye kaṇḍu.*

Raman self-GEN front-LOC one elephant-ACC saw

'Raman saw an elephant in front of him(self).'

And in Homeric Greek, a complex reflexive pronoun *hé- + autó-* must be used in the autopathic domain (41a), while the oblique domain allows the bare reflexive *hé-* (41b).

¹⁹A related notion is that of COARGUMENT DOMAIN (Kiparsky 2002), which includes P-arguments and oblique arguments, but not modifying participants.

(41) Homeric Greek (Kiparsky 2012: 86–87)

- a. *Heè d' autò-n epotrún-ei makésa-sthai.*
REFL.ACC PRT self-ACC rouse.3SG fight.AOR-INF
'And he rouses himself to fight.' (Iliad 20.171)
- b. *Aspíd-a taureíē-n skhéth' apò héo.*
shield-ACC bull.hided-ACC held.3SG from REFL.GEN
'He held the shield of bull hide away from him(self).'

An important further domain that is less often discussed is the ADPOSSESSIVE DOMAIN, where the coreferential anaphoric form is the adnominal possessor (=adpossessor) of the object or some other nonsubject participant. The West Germanic and Romance languages use nonreflexive possessive forms in this domain, which can be used subject-coreferentially or with disjoint reference (English *She₁ forgot her_{1/2} umbrella*, French *Elle₁ a oublié son_{1/2} parapluie*). By contrast, many other languages make an obligatory distinction between subject-coreferential and subject-disjoint adposessive person forms. Examples come from Polish, (42), and Evenki, (43).

(42) Polish

- a. *Ona₁ jest w swoim₁ pokoju.*
she is in self's room.
'She is in her (own) room.'
- b. *Ona₁ jest w jej₂ pokoju.*
she is in her room
'She is in her room (=another person's room).'

While Polish has an independent reflexive possessive pronoun (42a) contrasting with an independent nonreflexive one (42b), Evenki has possessive person indexes (=bound person forms), both reflexive (43a) and nonreflexive (43b).

(43) Evenki (Tungusic; Nedjalkov 1997: 103)

- a. *Nungan₁ asi-vi₁ iche-re-n.*
he wife-REFL.POSS see-NFUT-3SG
'He saw his (own) wife.'
- b. *Nungan₁ asi-va-n₂ iche-re-n.*
he wife-ACC-3SG.POSS see-NFUT-3SG
'He saw his wife (=another person's wife).'

9 Domains: Clausemate and long-distance reflexive constructions

From the point of view of a language like German, where the reflexive pronoun *sich* must have a CLAUSEMATE antecedent (i.e. the antecedent must be an argument of the same minimal clause, or coargument), the most surprising phenomenon is the existence of LONG-DISTANCE REFLEXIVE PRONOUNS (generally shortened to *long-distance reflexives*, because there are no long-distance voice markers). A long-distance reflexive is a reflexive pronoun that can occur in a subordinate clause and take its antecedent in the matrix clause, as in (44a–44d).²⁰ (We already saw an example from Japanese in 33 above.)

- (44) a. Italian (Giorgi 1984: 314)

*Gianni*₁ *pensava* [*che quella casa appartenesse ancora alla propria*₁
Gianni thought that that house belonged still to self's
famiglia].
 family

'Gianni thought that that house still belonged to his (own) family.'

- b. Mandarin Chinese (Cole et al. 2006: 22)

*Zhangsan*₁ *renwei* [*Lisi*₂ *zhidao* [*Wangwu*₃ *xihuan ziji*_{1/2/3}]].
 Zhangsan think Lisi know Wangwu like self
 'Zhangsan thinks that Lisi knows that Wangwu likes him.'

- c. Ingush (Nakh-Daghestanian; Nichols 2011: 645)

*Aaz shiiga*₁ *telefon tiexacha, Muusaa*₁ *chy-vaxar.*
 1SG.ERG 3SG.REFL.ALL phone do.CVB Musa in-go.PST
 'When I phoned him₁ (lit. 'himself'), Musa₁ went home.'

- d. Avar (Nakh-Daghestanian; Rudnev 2017: 155)

Mahmud bož-ula [žiw tik'aw či w-uk'-inal-da].
 Mahmud believe-PRS self.M good.M man M-be-MSD-LOC
 'Mahmud₁ believes that he_{1/*2} is a good man.'

²⁰Note that the opposite, a reflexive pronoun in the matrix clause and its antecedent in the subordinate clause, is excluded by antecedent-reflexive asymmetry in (33).

We can call this the LONG-DISTANCE DOMAIN, contrasting it with the CLAUSE-MATE DOMAIN, where the antecedent must be an argument of the same minimal clause.²¹ Long-distance reflexivizers have also been called *diaphors* (Middleton 2020).

In some languages, especially Indo-European languages of Europe, long-distance-reflexives are limited to infinitival clauses. This is the case, for example, in Polish, where the counterparts of (44a–44d) would not be possible, but in (45), the reflexive pronoun *siebie* can be coreferential with the matrix subject (or alternatively with the understood infinitival subject). Likewise in Avar, the reflexive pronoun *žiw-go* can only be used in the clausemate domain and the non-finite long-distance domain, while in finite subordinate clauses, the form *žiw* must be used (Rudnev 2017: §2.1).

- (45) a. Polish (Siewierska 2004: 195)

*Renata*₁ *kazała Piotrowi*₂ [*zbudować dom dla siebie*_{1/2}].
Renata.NOM ordered Piotr.DAT build.INF house.ACC for self.GEN
'Renata ordered Piotr to build a house for her (OR: for himself).'

- b. Avar (Nakh-Daghestanian; Rudnev 2017: 159)

*Ebelal-da*₁ *b-ix-ana [Malik-ica*₂ *žindie-go*_{1/2} *ruq' b-ale-b]*.
mother-LOC N-see-PST Malik-ERG self.DAT-EMPH house N-build-N
'Mother saw Malik building a house for her (OR: for himself).'

Perhaps one could generally distinguish different subdomains within the long-distance domain, but “finite” vs. “nonfinite” (Kiparsky 2002) does not work, because there is no cross-linguistically applicable definition of “(non)finite”.

10 Obviative and nonobviative anaphoric pronouns

In many (or perhaps most) languages, nonsubject anaphoric personal pronouns are OBVIATIVE (Kiparsky 2002, 2012), i.e. they cannot be coreferential with a coargument. This is illustrated in (46a–46b).

²¹The clausemate domain is often simply called “local domain” (even though locality is generally a relative notion), or sometimes “clause-bound(ed)” (e.g. Van Valin & LaPolla 1997: 393). It should also be noted that the term *clause* is very different from ‘minimal clause’, because a clause is generally taken to include all of its subordinate clauses (see §7). This is why the definition in (1) talks about clauses, not sentences (though the latter would not have been wrong, because a sentence is generally understood as a maximal clause, and the difference between clauses and sentences is irrelevant in the context of (1)).

- (46) a. English
*The dogs₁ bit them_{2/*1}.*
 b. Mandarin Chinese (Cole et al. 2015: 142)
*Mali₁ hai-le ta_{2/*1}.*
 Mali hurt-PFV her
 'Mali hurt her (*herself).'

As noted earlier (§4), many languages (such as English and Mandarin) must use reflexive pronouns rather than (nonreflexive) personal pronouns when coreference is intended (*themselves*, *ta-ziji*). This frequent complementarity of personal pronouns and reflexive pronouns has often been noted and has been taken as a starting point for larger explanatory claims, but it is useful to have a separate term for anaphoric forms that cannot be used coreferentially with the subject. While anaphoric personal pronouns are often in complementary distribution with reflexive pronouns, this is not always the case.

In some languages, the use of reflexive pronouns is optional. This has been reported, for example, for Hausa, (47).

- (47) Hausa (Afro-Asiatic; Newman 2000: 524)
- a. *Tàlá táká gán tà à màdùubín.*
 Tala 3SG.PST see her in mirror
 'Tala saw her/herself in the mirror.'
 - b. *Tàlá táká gá kántà à màdùubín.*
 Tala 3SG.PST see herself in mirror
 'Tala saw herself in the mirror.'

Thus, Hausa *tà* is not obviative, unlike English *her*, even though it is a non-reflexive pronoun, like English *her*. The complementarity between nonreflexive and reflexive pronouns that we see in English textbook examples is by no means necessary (and it is not complete in English either, as seen in 39a). Another interesting case is Turkish, which has three types of 3rd person anaphoric pronouns: an obviative nonreflexive pronoun *on-*, a nonobviative nonreflexive pronoun *kendisi-*, and a reflexive pronoun *kendi-*, (48).

- (48) Turkish (Turkic; Kornfilt 2001: 200)
- Ahmet₁ onu₂ / kendini_{1,2} / kendisini₁ çok beğeniyor mu\$.*
 Ahmet him him(self) himself much admires
 'Ahmet admires him/him(self)/himself very much.'

Like Hausa, Turkish shows no complementary distribution of reflexive and obviative anaphoric pronouns, and it is clear that it must be specified that *on-* is obviative (i.e. that this cannot be derived from a general principle).

In addition to nonreflexive pronouns like *him/her/them* that are obviative, some languages also have reflexive pronouns that are obviative (as noted by Kiparsky 2002). Examples are Swedish *sig* and Malayalam *taan*, which are long-distance reflexives but cannot be coreferential in the autopathic domain, as illustrated by (49a–49b).

- (49) a. Swedish (Kiparsky 2002: 26)
- Generalen₁ tvingade översten₂ att hjälpa sig_{1/*2}.*
the.general forced the.colonel to help REFL
'The general₁ forced the colonel₂ to help him₁'.
- b. Malayalam (Dravidian; Jayaseelan 2000: 129) (cf. 40a)
- Raaman₁ wicaariccu [Siita₂ **tann-e**_{1/*2} kaṇḍu enna].*
Raman thought Sita self-ACC saw COMP
'Raman thought that Sita saw him.' (NOT: '...Sita saw herself.')

It is very common for nonreflexive personal pronouns to be obviative (and demonstrative-derived anaphoric pronouns are apparently always obviative), but as we also saw in (8–10) in §4, in some languages the ordinary anaphoric pronouns are not obviative (i.e. they only have anaphoric pronouns which work like Turkish *kendisi-*).

11 Coexpression patterns of reflexivizers

The next topic to be covered briefly here is coexpression patterns, i.e. the use of a single form in a language for several meanings or functions that other languages distinguish. Such patterns are often described in terms of "polysemy", but the term COEXPRESSION is more neutral in that it does not entail that the form actually has multiple (related) meanings in a language.

11.1 Reflexive voice markers

It has been well-known at least since Faltz (1977), Geniušienė (1987: Ch.1) and Kemmer (1993) that across languages, reflexive voice markers often have other uses, in addition to the reflexive meaning, and that the different meanings tend to recur. Kazenin (2001: 917) notes that such markers are "normally polysemous", and it is indeed hard to find a reflexive voice marker that has no nonreflexive

uses. For example, reflexive voice markers commonly have RECIPROCAL uses, as in (50).

- (50) Kuuk Thaayorre (Pama-Nyungan; Gaby 2008: 260)

- a. *Ngay nhaanhath-e.*
1SG.NOM watch-REFL
'I am looking at myself.'
- b. *Pul runc-e-r.*
2DU.NOM collide-REFL-PST
'They two collided with one another.'

When the verb denotes an action that is usually performed on inanimate objects, the reflexive voice marker often has an ANTICAUSATIVE use, as in (51).

- (51) Polish (Janic 2023 [this volume])

- a. *Gotuję wodę.*
boil.1SG water.ACC
'I am boiling water.'
- b. *Woda gotuje się bardzo szybko.*
water boil.3SG REFL very quickly
'The water boils very quickly.'

Other meanings that are sometimes coexpressed with reflexive voice markers are nontranslational motion middles (e.g. German *sich umdrehen* 'to turn around (intr.)'), passives (e.g. Russian *opisyvat's-sja* 'be described'), and antipassives (e.g. French *se saisir de* 'seize'; Janic 2016: 192).

11.2 Reflexive pronouns

Reflexive pronouns are often identical to nouns with meanings such as 'body' or 'head', evidently because they originate in a metonymy process. Schladt (2000) studied reflexive pronouns in 150 languages worldwide and found that over half of them have reflexive pronouns derived from body-part terms. In many languages, these behave like nouns in a variety of ways, which is evidently due to their relatively recent origin in nouns.

More intriguing is the fact that reflexive pronouns are very often identical or closely related to self-intensifiers (as in *The queen came herself*). In their sample of 168 languages, König et al. (2005) found 94 languages with identity of reflexive pronouns and self-intensifiers, and 74 languages where the two are different

forms. König & Siemund (2000) and König & Gast (2006) propose an explanation for this overlap, by noting that the meanings of self-intensifiers are similar to the meanings of reflexive pronouns, and they can thus explain that reflexive pronouns typically derive from (or are made up of) self-intensifiers. However, Gast & Siemund (2006) also note that the direction of change is sometimes the opposite, with reflexive pronoun uses preceding intensifier uses.

12 Coreference constructions that are not reflexive constructions

Grammatical systems often specify coreference in constructions that are never called reflexive constructions. Two examples were already given in §2 above. This section gives a few more illustrations, which show that the domain of coreference constructions is broader than the domain of reflexive constructions.

In some languages, a construction with an anaphoric adpossessor modifying the object is necessarily interpreted as coreferential with the subject. The constructions in the (a) examples below, (52–54), entail coreference between the subject and the object adpossessor.

- (52) Finnish (van Steenbergen 1991: 232)

- a. *Pekka₁ luki kirja-a-nsa₁.*
Pekka read book-3SG.POSS
'Pekka read his (own) book.'
- b. *Pekka₁ luki hän-en₂ kirja-a-nsa₂.*
Pekka read he-GEN book-3SG.POSS
'Pekka read his book (i.e. another person's book).'

- (53) Halkomelem (Salishan; Déchaine & Wiltschko 2017a: §6)

- a. *Th'ewx-xál-em te Strang.*
wash-foot-INTR DET Strang
'Strang washed his (own) feet.'
- b. *Th'ewx-t-es te Strang te sxele-s.*
wash-TR-3SG DET Strang DET foot-3.POSS
'Strang₁ washed his₁/his₂ feet.'

- (54) Chol (Mayan; Coon & Henderson 2011: 53–54)

- a. *Tyi i-boño y₁-otyoty jiñi wiñik₁.*
PFV 3.ERG-paint 3.POSS-house DET man
'The man painted his (own) house.'
- b. *Tyi i-boñ-be y₂-otyoty jiñi wiñik₁.*
PFV 3.ERG-paint-APPL 3.POSS-house DET man
'The man painted his/her house (i.e. another person's house).'

In all three languages, an additional form (a kind of ANTIREFLEXIVE marking) is required to allow (or even force) a disjoint interpretation. In Finnish and Halkomelem, this is the nonreflexive anaphoric person form, and in Chol, it is the applicative suffix *-be* on the verb.

Coreference constructions are also widespread in clause combining, e.g. in certain complement clauses (see 4 in §1), in infinitival purposive clauses (e.g. German *Sie kam, um zu helfen* [she came for to help] 'She came to help'), and in relative clauses (e.g. English *The people [living next door] are our friends*). Special same-subject (SS) and different-subject (DS) constructions are widely used for clause combining patterns of various kinds in the world's languages (when the SS/DS constructions are formally symmetrical, the term *switch reference* is sometimes used, e.g. van Gijn & Hammond 2016).²² These constructions also help with reference tracking, and some authors have tried to consider both clause-combining constructions and reflexive markers together (e.g. Matić et al. 2014). But so far, there is little work that attempts a comprehensive picture of coreference constructions of diverse types (but see Comrie 1988, 1999 for some very interesting proposals).

13 Two kinds of coreference: Discourse-referential and co-varying interpretations

Since the 1960s, it has been recognized that there are often two interpretations of coreferential anaphoric forms, which are best called the DISCOURSE-REFERENTIAL INTERPRETATION and the CO-VARYING INTERPRETATION (often called *bound-variable anaphora*, e.g. Reinhart 1983b; Déchaine & Wiltschko 2017b). The contrast can be illustrated by (55a–55b). In (55a), the dog is owned by a particular woman

²²When there is a special form for same-subject constructions, they would strictly speaking fall under the definition of reflexive construction in (1) above; see also the discussion of logophoric pronouns in §5.4.

who can be identified in the discourse. But in (55b), there is no particular woman, and no particular dog.

- (55) a. Discourse-referential
Ibrahim₁ loves her₂ dog.
- b. Co-varying
Every woman₁ loves her₁= dog. (every woman x: x loves x's dog)

Rather (55b) says that the interpretation of *her* varies with the interpretation of the quantified expression *every woman*. In logic, this is traditionally expressed by saying that there is a variable *x* that is BOUND by the quantifier 'every' that has scope over it. The anaphoric pronoun *her* can be thought of as corresponding to the bound variable *x* in (55b), rather than denoting a discourse referent.

In a tradition going back to Reinhart (1983a, 1983b), some authors have referred to this distinction as "coreference vs. binding" (e.g. Heim & Kratzer 1998: §9.1; Reuland 2011: §1.6.1), but this terminology is confusing, because *coreference* has long been used for the meaning underlying reflexive constructions, and is still widely used in this way. Thus, it is better to keep the term *coreference* for the meaning underlying reflexive constructions, and to distinguish between two subtypes of coreference: discourse referential coreference and co-varying coreference.²³

The distinction is somewhat relevant for reflexive constructions, because it appears that some reflexive constructions only allow a co-varying interpretation, while others also allow a discourse-referential interpretation of the reflexive pronoun. In many cases, anaphoric pronouns can be interpreted in both ways when they are coreferential with the subject, as illustrated in (56) (Sag 1976: 127–128).²⁴ These two interpretations are usually called STRICT READING and SLOPPY READING.

- (56) *Betsy₁ loves her₁ dog, and Sandy₂ does, too.*
- a. Strict reading (=Sandy also loves Betsy's dog)
Betsy₁ x: x loves her₁ dog
& *Sandy₂ y: y loves her₁ dog* (discourse-referential)

²³I would thus say that two arguments are coreferential (i) if they have the same referent or (ii) if their reference covaries. Authors who prefer to use *coreference* in a narrow sense (only for referent identity) have proposed alternative cover terms, e.g. *coconstruction* (Safir 2005) or *covaluation* (e.g. Reinhart 2006), but these terms have not been widely adopted.

²⁴There is also a third reading of this sentence: *Betsy₁ loves her₃ dog, and Sandy does, too.* Here the anaphoric pronoun is not coreferential with the subject. Its reference is not syntactically limited, and in the right context, it may be coreferential with *Sandy* (this is clearer in an example like *Betsy loves his dog, and Ibrahim does, too.*)

- b. Sloppy reading (=Sandy also loves her (own) dog)
Betsy x: x loves x's dog & Sandy y: y loves y's dog (co-varying)

Reflexive coreferential pronouns are often said to force a sloppy reading (i.e. a co-varying interpretation), not allowing a strict reading. Thus, it seems that (57) says that Sandy also looked at herself in the mirror. But on the other hand, (58) can apparently also mean that Ben's boss does not admire Ben so much (i.e. can have not only the sloppy reading, but also the strict reading).

- (57) Co-varying
Betsy looked at herself in the mirror, and so did Sandy.
- (58) Co-varying or discourse-referential
Ben admires himself more than his boss does.

The relevance of the co-varying/discourse-referential distinction for reflexive constructions seems clearest with adposessive reflexives. For Russian, Dahl (1973: 106) reported the contrast between (59a), with the reflexive adposessive *svoj*, and (59b), with the nonreflexive 1st person singular adposessive *moj*. The contrast in (60a–60b) is completely analogous.

- (59) a. Co-varying
Ja ljublju svoju ženu, i Ivan tože.
 I.NOM love REFL.POSS wife.ACC and Ivan.NOM too
 'I love my wife, and so does Ivan (=Ivan loves his (own) wife).'
- b. Discourse-referential
Ja ljublju moju ženu, i Ivan tože.
 I.NOM love my wife and Iva.NOM too
 'I love my wife, and so does Ivan (=Ivan loves my wife).'
- (60) a. Co-varying
Tol'ko ja ljublju svoju ženu.
 only I.NOM love REFL.POSS wife.ACC
 'Only I love my wife (=nobody else loves his wife).'
- b. Discourse-referential
Tol'ko ja ljublju moju ženu.
 'Only I love my wife (=nobody else loves my wife).'

It seems that when the coreference is not expressed by an anaphoric pronoun but is implicit in the construction (as in the cases in §12), we only get the co-varying interpretation. Sentences such as *He undressed, and so did she* (cf. (4)

above), are unambiguous (she did not undress him), just like sentences such as *He wanted to sing, and so did she* (this cannot mean that she wanted him to sing). Likewise, when the reflexivizer is a verbal marker, we seem to get only the co-varying interpretation, as in (61a) from Russian, which contrasts with (61b).

(61) Russian

a. Co-varying only

Saša posmotrela-s' v zerkalo, i ja tože.

Sasha looked-REFL in mirror and I too

'Sasha looked at herself in the mirror, and so did I.'

b. Co-varying or discourse-referential

Saša posmotrela na sebja v zerkalo, i ja tože.

Sasha looked at self in mirror and I too

'Sasha looked at herself in the mirror, and so did I.'

Thus, there are certain situations where the contrast between discourse-referential and co-varying coreference is relevant to grammatical coding, but there is no systematic cross-linguistic research on this aspect of grammatical expression.

14 Conclusions

This concludes the survey of reflexive and related constructions, which I combined with a survey of key terms for general linguistics that are useful for comparing languages and identifying shared traits. The wide range of diverse reflexive constructions makes it difficult to get a broad view of the big picture, and due to the language-particular focus of the great majority of research papers, it is not easy to focus on what is general and what is particular in this domain. Much of the literature on reflexive pronouns has taken the conditions on English reflexive pronouns as a starting point, but it seems that a broader perspective is more promising when we try to identify general traits of human languages.

The three appendixes that follow contain a tentative list of universal generalizations (Appendix A), a list of technical terms as used in this paper (Appendix B), and a list of other terms that have been used in the literature (Appendix C) but that seem less suitable to me because they cannot be defined clearly, at least not independently of larger controversial claims.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ANT	anterior (aspect)	LOGOPHOR	logophoric
AOR	aorist	MSD	masdar
CORE	core argument	NFUT	non-future
DYN	dynamic	PRT	particle
EMPH	emphatic	REAL	realis
FIN	finite	SUFF	suffix
HAB	habitual	VAL	validator
LIM	limitative		

Appendix A: Some universals of reflexive constructions

Universal I: If a language has a reflexive voice marker or a reflexive argument marker, one of its uses is for autopathic coreference (agent-patient).

Universal II: If a language uses different constructions for agent-patient coreference for different verb types, then it uses shorter coding for introverted verbs than for extroverted verbs (König & Vezzosi 2004; Haspelmath 2008: 44).

Universal III: In all languages, the usual coding of disjoint anaphoric reference is at least as short as the usual coding of agent-patient coreference (Haspelmath 2008: 48).

Universal IV: If an anaphoric pronoun may also be used as a demonstrative, it is always obviative in the autopathic domain.

Universal V: If a language has nonreflexive object indexes (=bound object person forms), these cannot be used subject-coreferentially in the autopathic domain.

Universal VI: If a language has a reflexive voice marker, it also has a voice marker for reciprocal constructions (Dixon 2012: 141).

Universal VII: If a language has a reflexive adposessive pronoun, it also has a reflexive object pronoun (Haspelmath 2008: 50).

Universal VIII: If a language has a reflexive pronoun in locative phrases, it also has a reflexive pronoun in object position (Haspelmath 2008: 55).

Universal IX: If a language has a reflexive pronoun in the long-distance domain, it also has a reflexive pronoun in the autopathic domain (Haspelmath 2008: 58).

Universal X: If a language has different reflexive pronouns in the autopathic and the long-distance domain, the autopathic reflexive pronoun is at least as long as the long-distance reflexive (Pica 1987; Haspelmath 2008: 55).

Universal XI (Antecedent-reflexive assymmetry): In all languages, the antecedent is higher on the rank scale of syntactic positions than the reflexive pronoun: subject > object > oblique > within nominal/within embedded clause (see §7 above; Dixon 2012: 152).

Universal XII: If a language has a prenominal definite article, it does not have a reflexive adposessive pronoun (Despić 2015).

Universal XIII: If a reflexivizer and a reciprocralizer are formally related to each other, then the reflexivizer is formally simpler (Dixon 2012: 153).

Appendix B: Technical terminology used in this paper

anaphora: Anaphora is the use of linguistic forms or constructions to signal coreference within the discourse or within a clause.

anaphoric form: An anaphoric form is a form that stands for a referent which is coreferential with another referent (an antecedent) in discourse. (Typical anaphoric forms are anaphoric pronouns.)

antecedent: In an anaphoric relationship, the antecedent of an anaphoric form or of an unexpressed anaphoric referent is the referent which determines its reference.

clause: A clause is a combination of a predicate (full verb or nonverbal predicate) and its arguments plus modifiers.

endophoric use: An endophoric use of a pronoun is an anaphoric use within a sentence or the discourse, as opposed to an exophoric use.

exophoric use: An endophoric use of a pronoun is a use for a referent that was not mentioned earlier in the discourse but is present in the context.

obviative pronoun: An obviative pronoun is an anaphoric pronoun that cannot be coreferential with a coargument.

reflexive argument marker: A reflexive argument marker is a grammatical marker that occurs on a transitive verb and that exhibits striking similarities with nonreflexive object indexes, especially with respect to its position.

reflexive construction: A reflexive construction is a grammatical construction that can only be used when two participants of a clause are coreferential and that contains a special form that signals this coreference.

reflexive pronoun = reflexive nominal: A reflexive pronoun is a form that can be used in the position of a full nominal and that signals coreference with an antecedent in the same clause (subtypes: reflexive pronominaloid...)

reflexive pronominaloid: A reflexive pronominaloid is a reflexive pronoun that shares striking similarities with independent personal pronouns and is strikingly different from the nouns in the language.

reflexive voice marker: A reflexive voice marker is a grammatical marker that occurs on a transitive verb and indicates that its agent is coreferential with its patient, without exhibiting similarities to argument indexes.

reflexivizer: A reflexivizer is a reflexive pronoun or a reflexive voice marker.

self-intensifier: A self-intensifier is a form that accompanies a nominal and indicates that the nominal's referent is the central referent in a centre-periphery configuration.

Appendix C: Other terms used elsewhere in the literature

anaphor: The term *anaphor* became well-known through Chomsky (1981), and its generally understood as meaning ‘reflexive pronoun or reciprocal pronoun’,²⁵ but it is rarely defined explicitly in this way (but cf. Forker 2014: 52, n. 1). Some authors define *anaphor* as an ‘interpretatively dependent element’ (cf. Reuland 2018: 82), which seems to mean that it cannot be used exophorically. However, as noted by Kiparsky (2002, 2012), many languages have anaphoric forms that must be used endophorically (he calls them “discourse anaphors”), e.g. English *it*. Calling such forms, too, “anaphors” is confusing. Moreover, some authors have invoked a completely different criterion for distinguishing anaphors from pronominals: “pronouns can have split antecedents, and anaphors cannot” (Volkova 2017: 178; following Giorgi 1984: 310).

binding theory: “Binding theory” (or sometimes “Binding Theory”) is the name for three general rules of English grammar formulated by Chomsky (1981) (following Reinhart 1976, 1983a): (A) Anaphors must be bound in their local domain; (B) Pronominals must be free in their local domain; (C) Other nominals must always be free; where “X binds Y” means that X is coindexed (and thus coreferential) with Y and c-commands it. These rules or principles have typically been thought to be universal, though they were established entirely on the basis of English. Since the 1990s, it has been universally recognized that the 1981 formulation does not work (even for English), and many alternative versions have been proposed (Everaert 2003), but always as claims about the regularities of particular languages (possibly rooted in innate knowledge), not as readily testable claims about cross-linguistic distributions. (See Varaschin (2021) for a recent overview of the classical binding theory.)

controller: The term *controller* is sometimes used in the same sense as *antecedent* (e.g. Dixon 2012).

pronominal: In the Reinhart-Chomsky tradition, “anaphors” are typically contrasted with “pronominals”, illustrated by English personal pronouns such as *her*, *him*, *them*. Like *anaphor*, the term *pronominal* is rarely defined, and it has never been clear whether nonobviative personal pronouns like Jambi

²⁵More transparently, one would of course use *anaphor* for ‘anaphoric form’ (or more specifically, ‘anaphoric pronoun’). The term is indeed sometimes used in this sense by computational linguists in the context of anaphora resolution (e.g. Mitkov 2002).

Malay *dio*, see 10 in §4) should be considered “pronominals”. (In my terminology, English *him* is an obviative-nonreflexive 3rd person pronoun, while Jambi Malay *dio* is a nonobviative-nonreflexive 3rd person pronoun.)

reflexive: The noun *reflexive* is often used vaguely in the sense ‘reflexive construction’, or ‘reflexive element’, or ‘reflexive pronoun’ (e.g. Geniušienė 1987; Frajzyngier & Curl 1999; Kazenin 2001; König & Gast 2008, Déchaine & Wiltschko 2017a). The context sometimes makes it sufficiently clear what intended, but when the term is used in a book title, there is no context. I avoid such abbreviated terms in formal contexts. (Though I do abbreviate *long-distance reflexive pronoun* to *long-distance reflexive*, as noted in §9.)

reflexivity: The term *reflexivity* is sometimes used collectively for the domain of reflexive constructions, and in this sense, there is no problem with it (cf. similar terms such as *ergativity*, *transitivity*, *coordination*). But it is sometimes also used as if it were a semantic notion, and linguists talk about “encoding of reflexivity” (e.g. Déchaine & Wiltschko 2017b: 63). For the semantic notion, I find *coreference* a better term (or maybe *autopathic coreference*, if agent-patient coreference is intended), because it is best to have different terms for constructions and the meanings they express (see n. 2).

reflexivization: This term from the 1960s originally referred to the creation of a reflexive construction as a grammatical operation (or transformation), but more recently it has sometimes been used in a more restricted sense, referring specifically to the creation of “reflexive predicates” (or verbs). Much of this corresponds to reflexive voice marking, but authors such as Reinhart & Siloni (2005: 399) and Everaert (2013: 197) include constructions like *Max undressed*, which are not regarded as reflexive here (see note 2).

SE anaphor vs. SELF anaphor: The distinction between “simplex expression” (or SE) anaphors (Dutch *zich*, Swedish *sig*) and complex SELF anaphors (English *himself*, Dutch *zichzelf*, Swedish *sig själv*) became well-known through Reinhart & Reuland (1993), but these authors did not give clear definitions of the two terms. It seems that they thought that reflexive pronomi-noids of the European type (like *zich*; see §6.4) and self-intensified anaphoric pronouns (like *himself*; see §6.3) are typical of reflexive pronouns in general, but it has been known since Faltz (1977) that other types of reflexive nominals are more common in the world's languages.

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Part II

Africa

Chapter 3

Reflexive constructions in Bangime

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Bangime, a language isolate spoken in Central Eastern Mali, has two ways to express coreference between clause participants. One strategy is through coordinated markers from one of the language's pronominal series. These markers can be considered to be the language's reflexive pronouns, though it is of typological interest to note that, in object position, an anaphoric pronoun of this series can be coreferential with the main clause's subject. Furthermore, Bangime displays the unusual property of aligning second persons singular and plural to the exclusion of all other persons. This chapter also discusses an additional coreference strategy, namely that of a possessed form of the noun 'head', an areally robust feature of West Africa.

1 Introduction

In Bangime, coreference between clause participants can be expressed in two ways. The first, as with many other West African languages (Heine 2011), including those of the Atlantic branch as well as surrounding Dogon languages, but excluding Mande, involves the noun 'head'. However, Bangime is different from neighboring languages in that, in Bangime, the person and number of the clause's subject are indexed (cf. Haspelmath 2013) on verbs and tense-aspect auxiliaries, and, in the case of the reflexive construction, on nouns. This is shown in (1), an excerpt from a narrative, where these indexes are glossed as lettered sets that are explained in §3.

- (1) *mɛɛ à gò m=bogò-ɛɛ ï=kārā ï=dēgē ï=kɛ*
but DEF man 3SG.B=big-DIM 3SG.B=find.3SG.PFV 3SG.B=head 3SG.B=PRF
'...but the old man [lit. 'little old man'] had found himself again.'
(Heath & Hantgan 2018: 10)



In the surrounding Dogon languages, reflexive constructions are formed with a possessed form of the noun ‘head’ so that ‘my head’ can be interpreted to mean ‘myself’. In Bangime, as will be discussed in detail in §4.1, the portion of (1) highlighted in bold differs from the language’s typical possessive construction.

The second method of expressing coreference between clause participants, as illustrated in (2–5) drawn from Heath & Hantgan (2018: 438), involves a pronoun (series) which is described as a reflexive pronoun here, but also occurs with other middle functions (§4.2). It is also of interest to note that the language opposes second persons to first and third persons plural, as well as third person singular, shown below in (7).

- | | |
|---|---|
| (2) à <i>dègù</i> á | (3) àà <i>dègù</i> àà |
| 2SG.A hit.2SG.PFV 2SG.D | 2PL.A hit.2PL.PFV 2PL.D |
| ‘You hit yourself .’ | ‘You (plural) hit yourselves .’ |
| | |
| (4) <i>n̄è</i> <i>n̄=dègù</i> <i>mī</i> | (5) <i>n̄i</i> <i>n̄=dègù</i> <i>mī</i> |
| 1PL.A 1PL.B=hit.1PL.PFV 1PL.D | 3PL.A 3PL.B=hit.3PL.PFV 3PL.D |
| ‘We hit ourselves .’ | ‘They hit themselves .’ |

Furthermore, as shown in (6–7) drawn from Heath & Hantgan (2018: 401), pronouns for coreference and disjoint reference for third singular antecedents are identical and therefore potentially ambiguous in meaning.

- | | |
|--|--|
| (6) Ø <i>dègù</i> <i>mī</i> | (7) Ø <i>dègù</i> <i>mī</i> |
| 3SG.A hit.3SG.PFV 3SG.C | 3SG.A hit.3SG.PFV 3SG.D |
| ‘He/She _x hit him/her _y .’ | ‘He/She _x hit himself/herself _x .’ |

The fact that, in Bangime, an anaphoric pronoun in object position can be coreferential with the subject of its clause may be interesting from a typological perspective as discussed by Haspelmath (2023 [this volume]); this is explored further in §4. Furthermore, that the pronoun *mī* serves to mark coreference and disjoint reference for the third persons singular and plural, as well as the first person plural to the exclusion of the second persons singular and plural and the first person singular is somewhat surprising; the corresponding first person singular reflexive pronoun is given in (8).

- | |
|---|
| (8) <i>n̄</i> <i>dégù</i> <i>mī</i> |
| 1SG.A hit.1SG.PFV 1SG.D |
| ‘I hit myself .’ (Heath & Hantgan 2018: 438) |

This chapter seeks to explore means of coreference in Bangime through an exposition of the pronominal system in general. The next section, §2, provides a brief background on the speakers of Bangime and the language's status as an isolate. An overview of the language's pronominal system is given in §3. In §4, reflexive constructions in Bangime are presented, followed by a discussion of intensifier uses involving reflexive constructions in §5. A conclusion is given in §6.

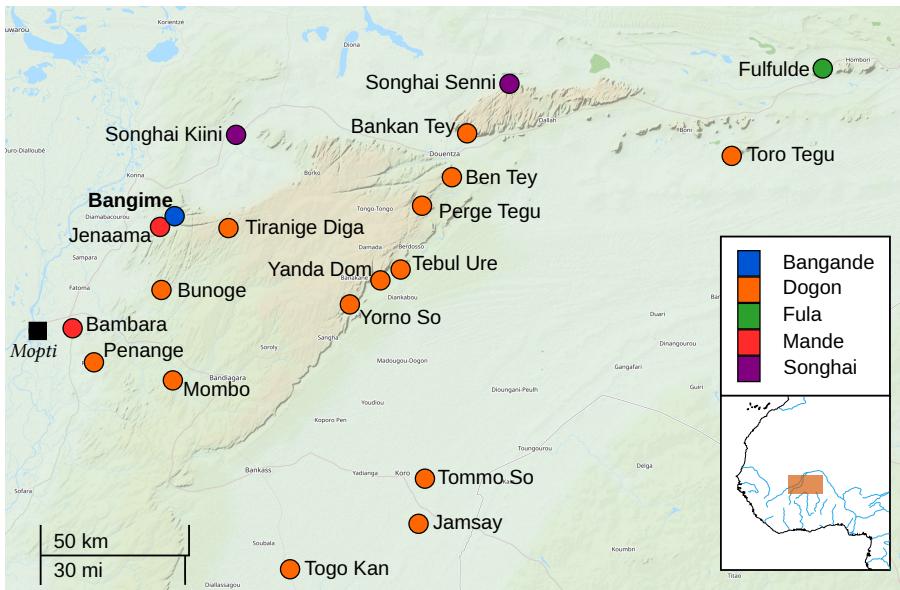
Data are drawn from both a published grammatical description and a doctoral thesis as well as unpublished textual sources and newly elicited examples. The questionnaire by Janic & Haspelmath (2023 [this volume]) provided guidance for the data compilation and analysis. Transcriptions are phonetic, following the IPA, and glossing follows Leipzig conventions with additions noted in the Appendix.

2 Background

Bangime is a language isolate spoken by around 1,500 people in seven small villages in a remote area of central-eastern Mali. The Bangime-speaking community, the Bangande, together with the Dogon ethno-linguistic group, are the sole inhabitants of the Bandiagara Escarpment, an arduous cliff range located east of the Niger River and south of the Sahara Desert (see Figure 1).¹ The Dogon languages were not well described until recently; it is only now apparent that there exist at least 21 different Dogon languages. Nevertheless, and despite the fact that the Bangande say that they and their language are Dogon, the linguistic divergences between Bangime and the Dogon languages separate them completely. Moreover, Bangime is not related at all to the other neighboring language, Jenama, of the Bozo-Mande grouping.

Grammatical structures found in Bangime pertinent to this study include its almost complete lack of affixal morphology, a tripartite tonal system, and subject-initial clausal word order in non-focus constructions. Possessive pronouns and the definite article precede a noun in a noun phrase (e.g. *ā kùwò* 'the house', *màā kùwò* 'his/her house'), but adjectives follow the noun. With certain kinship relations, possession is expressed in a manner which differs from other possessed nouns, as discussed in §3.4 below. Verbs are divided into classes based on their morpho-phonological properties and thus follow different patterns of inflection therein. A verb phrase either consists of simply a verb stem (with inflectional marking on the verb itself), or it also contains a auxiliary specifying the aspect of the clause which either precedes or follows the verb stem depending on the

¹The map has been generated by the lingtypology package for R. Moroz G. (2017) *lingtypology: easy mapping for Linguistic Typology* (<https://CRAN.R-project.org/package=lingtypology>).



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Figure 1: Map of Bandiagara Escarpment spoken languages

aspect in question. It is relevant to note that pronoun forms precede both the verb stem and the auxiliary when present.

Major word classes in Bangime consist of nouns, verbs, numerals, adjectives, adverbs, and ideophones. Particles in the language include the determiner, postpositions, and a question marker. Word classes can be distinguished morphologically as well as syntactically. The small number of bound morphemes in the language are all suffixes or clitics including an agentive, diminutive, and plural markers on nouns and a causative and aspectual markers on verbs. Tone is both lexical and grammatical and the interaction between the two is intricate. The elaborate argument-indexing system is presented in the following section (§3). Constituent word order depends on the tense or aspect of the clause and is elaborated upon in §3.2.

3 Person forms

Bangime has a complex system of person forms, including both bound and free forms, which is essential to understand in order to evaluate the evidence put forth for the presence or absence of a special form that signals coreference, a reflexive

pronoun, in the language. The following subsection, §3.1, presents Bangime personal pronouns in terms of four sets, and §3.2 provides the slots into which these pronouns fit in a clause. §3.3 provides examples of personal pronouns and §3.4 illustrates two relevant ways of forming possessive constructions in Bangime.

3.1 Person form sets

Person and number marking in Bangime consists of both bound person indexes and free personal pronouns. The Bangime person forms consist of four sets depending on the phonetic (surface) realization and position in a clause, as listed in Table 1 and exemplified in §3.2 below. As already seen in (2–5) above, the members of Set D are used as reflexive pronouns.

Table 1: Bangime person forms

Person/Number	A	B	C	D
1SG	$\dot{n} \sim \emptyset$	<i>n</i>	<i>mí</i>	<i>mí</i>
3SG	\emptyset	<i>n</i>	<i>mì(i)</i> ~ <i>mìl</i>	<i>mìl</i>
1PL	<i>nè</i>	<i>n</i>	<i>nēè</i>	<i>mìl</i>
3PL	<i>nì</i>	<i>n</i>	<i>nìl</i>	<i>mìl</i>
2SG	<i>à</i>	<i>á</i>	<i>á</i>	<i>á</i>
2PL	<i>àà</i>	<i>á</i>	<i>āā(-rū)</i>	<i>āā</i>

As represented in Set A, singular first and third persons are either zero or, as in Set B, reduced to a nasal that assimilates in place to the initial consonant of the following constituent in the clause (there are few vowel-initial words in Bangime) and receives its tonal specification from the final tone of the preceding word. As was illustrated in §1, for Sets C and D, forms of the first and third persons plural are identical to that of the third person singular. Second person singular is the same for all sets (second person singular indexes are distinguished by tones alone) but second person plural is sometimes followed by one of the few suffixes in the language: a suppletive plural suffix (*-rū*) that is also used with kin terms in the language. The following subsection demonstrates where each person form set occurs in the three main clausal paradigms presented in this chapter.

3.2 Person form slots

In Bangime, person and number marking occurs multiple times throughout a sentence by means of the person forms presented in Table 1 and tonal melodies on the verb stem. The simple perfective paradigm is shown first as it represents the language's most basic clausal construction. The linear order of the verb and the object is reversed between a perfective (Tables 2 and 3) and an imperfective (Table 4) verb phrase.

Table 2: Simple transitive perfective clausal paradigm

(S)	S	S	V	O
(NP)	Pronoun Set A	Pronoun Set B	STEM	NP \wedge Pronoun Set C \wedge D

Table 3: Transitive perfective clausal paradigm

(S)	S	AUX	S	V	O
(NP)	Pronoun Set A	PFV	Pronoun Set B	STEM	NP \wedge Pronoun Set C \wedge D

Table 4: Transitive imperfective clausal paradigm

(S)	S	AUX	O	S	V
(NP)	Pronoun Set A	IPFV	NP \wedge Pronoun Set C \wedge D	Pronoun Set B	STEM

As mentioned above and can be seen from Tables 2–4, a personal pronoun or person index consistently precedes the verb stem and an auxiliary, if present. The next subsection gives concrete examples of the sets and slots presented here.

3.3 Personal pronoun examples

In general, intransitive verb stems are not preceded by person indexing; the verb ‘go’ is an exception. Examples in the perfective aspect featuring the verb *wōrē* ‘go’ (9–14) are drawn from Heath & Hantgan (2018: 273).

- (9) *ŋ kóó ñ=wóré*
1SG.A 1SG.PFV 1SG.B=go.1SG.PFV
'I had gone.'
- (10) *à kwá á wóré*
2SG.A 2SG.PFV 2SG.B go.2SG.PFV
'You had gone.'
- (11) *∅ kóó ñ=wōrè*
3SG.A 3SG.PFV 3SG.B=go.3S.PFV
'He had gone.'
- (12) *àà kwá á wōrè*
2PL.A 2PL.PFV 2PL.B go.2PL.PFV
'You (pl) had gone.'
- (13) *nè kóó ñ=wōrè*
1PL.A 1PL.PFV PL.B=go.1PL.PFV
'We had gone.'
- (14) *nì kóó ñ=wōrè*
3PL.A 3PL.PFV 3PL.B=go.3PL.PFV
'They had gone.'

These examples illustrate person forms of Sets A–B. Set A occurs in subject position. Based on its tonal behavior (the nasal of Set B has no phonemic tone), I consider the nasal person index in Set B to be a proclitic. The person forms of Sets C and D are free personal pronouns. The perfective clausal paradigm further illustrates which what was mentioned above in §1: in Bangime, second persons singular and plural are marked almost identically, and in opposition to the other persons in the language.

Examples using the verb 'bathe' in the simple perfective, which are drawn from Heath & Hantgan (2018: 325), are given in (15–16) to illustrate person forms of Sets C–D.

- (15) *∅ tūù mí*
3SG.A bathe.3SG.PFV 1SG.C
'He/She bathed me.'
- (16) *∅ tūū mīi*
3SG.A bathe.3SG.PFV 3SG.D
'He/She bathed (him/herself).'

Although some person forms from Set C are homophonous with those from Set D, the former cannot be used together with those from Set A to express coreference between a subject and an object. That is, for those persons which differ in form, such as first and third persons plural, Set C cannot be interchanged with Set D; the former strictly marks disjoint reference between participants while the latter marks coreference.

Further adding to the ambiguity, syntactically, both person form Sets C and D occupy the same position, save for when an object pronoun is focalized as illustrated in (17–18).

- | | |
|---|---------------------------------|
| (17) <i>∅ mūñwɔ̄ mí</i> | (18) <i>mí n=dègè</i> |
| 3SG.A like.NEG.3SG.IPFV 1SG.C | 1SG.C 3SG.B=hit.3SG.PFV |
| ‘...he does not like <i>me</i> .’ | ‘It hit <i>me</i> .’ |
| [Narrative, TB2008-07-12, Line 1] | [Survey, AD2012-08-06, Line 14] |

In focused-object position, the expected word order for Bangime constituents is reversed yet again: a focused object appears after the verb in the imperfective aspect and before it in the perfective.

As shown in (19–20), the language does not require an object to be overtly expressed. Otherwise, as can be seen in (20) and Table 3, non-focused object noun phrases, like free pronouns, occur post-verbally in the perfective aspect.

- | | |
|---|--|
| (19) <i>nì kóó jí=qùrù</i> | |
| 3PL.A 3PL.PFV 3PL.B=kill.3PL.PFV | |
| ‘They killed (him).’ (Narrative, Hantgan 2013: 394) | |
| (20) <i>nì kóó jí=qùrù à dègè n=céé</i> | |
| 3PL.A 3PL.PFV 3PL.B=kill.3PL.PFV DEF head.DEF 3SG.B=owner | |
| ‘They killed the chief [lit. ‘head owner’].’ (Narrative, Hantgan 2013: 477) | |

Persons other than third person singular may also be omitted in object position but with lower frequency. On the other hand, pronouns of Set D are obligatory in reflexive constructions.

The following subsection outlines two possessive strategies in the language as these will be crucial to the comprehension of the reflexive constructions presented in §4.

3.4 Possessive pronouns

There are two ways of marking possession in Bangime: most possessed nouns are preceded by a pronoun from Set A plus the possessive morpheme *maa* (a kind of genitive preposition). However, the second person singular possessive pronoun is simply [àà]. Examples provided in (21–24) are drawn from Heath & Hantgan (2018: 57).

- | | |
|----------------------------------|------------------------------------|
| (21) <i>∅ máá kùwò</i> | (22) <i>àā kùwò</i> |
| 1SG.A 1SG.POSS house.POSS | 2SG.A.POSS house.POSS |
| ‘my house’ | ‘your (SG) house’ |

- (23) *∅ màā kùwò*
3SG.A 3SG.POSS house.POSS
'his/her house'

- (24) *séédù màā kùwò*
Seydou 3SG.POSS house.POSS
'Seydou's house'

Another means of expressing possession in Bangime is with the use of person forms alone. With certain kin terms, for example 'father' as shown in the following examples drawn from Heath & Hantgan (2018: 58–59), person forms of Set A may be used with the possessive morpheme (27), or alone (25–26), (28).

- (25) *∅ bòw*
1SG.A father.1SG.POSS
'my father'

- (27) *séédù màà bòw*
Seydou 3.POSS father.POSS
'Seydou's father'

- (26) *à bòw*
2SG.A father.2SG.POSS
'your father'

- (28) *séédù bòw*
Seydou father.3SG.POSS
'Seydou's father'

Note that each type of possessive marking influences the tone of the possessed noun differently; the possessive morpheme bears its own tone depending on the person and number of the possessee which triggers a kind of default tonal marking on the possessed noun. When the possessive morpheme is not present, the possessed noun represents the tone of the person and number of the possessee.

In addition to the constructions with the possessive morpheme *maa* (in 21–24) and with kin terms (in 25–28), there is a third possessive construction: similar to the kinship-type of possession, a possessive, often compound-like, construction in Bangime may be formed using the person indexes from Set B; compare (29) with (30).

- (29) *míró n=dégé*
bee.INDF 3SG.B=head.3SG.POSS
'bee's head'

- (30) *míró m=págà*
bee.INDF 3SG.B=container.3SG.POSS
'apiary [lit. 'bee's container']'

Somewhat curiously, body parts belonging to animals, particularly insects, are usually expressed using this construction while humans use the possessive morpheme. More about this and how it relates to reflexive constructions in Bangime will be said below in §4.1.

Now that an overview of person forms has been presented, the following section (§4) depicts the strategies found in the language to express coreference between clause participants.

4 Reflexive constructions

As stated in §1, there are two ways of expressing coreference between clause participants in Bangime.² Henceforth, these two constructions will be discussed as the ‘reflexive noun’ and ‘reflexive pronoun’, presented in §4.1 and §4.2 respectively.

4.1 Reflexive noun

The reflexive noun construction consists of the genitive construction with the noun *dege* ‘head’, of the possessed type presented above in §3.4, in non-focused object position of a transitive clause. That is, in the reflexive noun construction, the possessive is formed from Set B of the person forms provided in Table 1 above. The reflexive noun paradigm is illustrated with the following examples, (31–36), which are drawn from Heath & Hantgan (2018: 442–443).

- (31) *jì jágù ñ=dégé*
1SG.A cut.1SG.PFV 1SG.B=head.1SG.POSS
'I cut myself.'
- (32) *∅ jágū ñ=dēgè*
3SG.A cut.3SG.PFV 3SG.B=head.3SG.POSS
'He cut himself.'
- (33) *à jágù à dégé*
2SG.A cut.2SG.PFV 2SG.B head.2SG.POSS
'You (sg) cut yourself.'
- (34) *àà jágū à dēgè*
2PL.A cut.2PL.PFV 2PL.B head.2PL.POSS
'You (pl) cut yourselves.'

²I follow Haspelmath (2019: 2–3) in using the semantically-based term ‘clause participant’ rather than the syntactic ‘clause argument’ as the subject pronoun is not necessarily overtly expressed in Bangime.

- (35) *nē jìng jàgū n=dēgè*
 1PL.A 1PL.B cut.1PL.PFV 1PL.B=head.1PL.POSS
 ‘We cut ourselves.’

- (36) *nì jìng jàgū n=dēgè*
 3PL.A 3PL.B cut.3PL.PFV 3PL.B=head.3PL.POSS
 ‘They cut themselves.’

However, besides the possessive constructions as listed above in §3.4, possessed body parts are usually expressed with the possessive morpheme; compare (37) with (32) above.

- (37) *jìng jàgù màā kwāā*
 3SG.A cut.3SG.PFV 3SG.POSS throat.POSS
 ‘He slaughtered it (the sheep) [lit. cut its throat].’ [Narrative,
 NB2010-07-16, Line 41]

Therefore, as stated by Heath & Hantgan (2018: 442), *maa dege* translates to ‘possessor’s head’ while *n dege* is the equivalent of ‘X’s self’, and therefore the reflexive noun as depicted here.

Recall from Table 2–Table 4 that in perfective clauses, an object follows the verb, whereas in imperfective clauses, an object precedes the verb. As illustrated by (31–36) above and (38) here, the reflexive noun follows the expected word order and person marking pattern for genitive constructions.

- (38) *ná dá n=dēgè n=jijé*
 1SG.A 1SG.IPFV 1SG.B=head.1SG.POSS 1SG.B=see.1SG.IPFV
 ‘I see myself.’ [Survey, AD2020-01-15, Line 1]

Note that there is no specific reflexive possessive construction in Bangime. That is, ‘possessor’s (own) possessed’ is expressed the same as the regular possessive construction, unless a potentially semantic ambiguity may arise with the noun ‘head’. Compare examples using the verb *kara* ‘shave’ in (39–40).

- (39) *ná dá máá sémbō n=kàà*
 1SG.A 1SG.IPFV 1SG.POSS beard.POSS 1SG.B=shave.1SG.IPFV
 ‘I am shaving my beard.’ [Survey, AD2020-01-15, Line 5]

- (40) *ná dá máá n=dēgè n=kàà*
 1SG.A 1SG.IPFV 1SG.POSS 1SG.B=head.1SG.POSS 1SG.B=shave.1SG.IPFV
 ‘I am shaving my (own) head.’ [Survey, AD2020-01-15, Line 6]

While the possessive morpheme is sufficient to indicate that the subject is shaving his or her own beard in (39), in (40) the addition of the person index from Set B disambiguates disjoint-reference with the subject.

One other method of distinguishing coreference from disjoint reference is with the reflexive pronoun that is presented below in §4.2. While the person index preceding the noun ‘place’ in (41) could indicate either coreference or disjoint reference with the subject, the reflexive pronoun in (42) can only mean coreference with the subject.

- (41) *dòò* \emptyset *dà* *ŋàw̪ə* $\bar{n}=jàw$
 sleep.INDF 3SG.A 3SG.IPFV sleep.3SG.IPFV 3SG.B=place
 ‘S/He_x will sleep at his/her_{x,y} place.’ (Heath & Hantgan 2018: 441)

- (42) *dòò* \emptyset *dà* *ŋàw̪ə* *mī* *jàw*
 sleep.INDF 3SG.A 3SG.IPFV sleep.3SG.IPFV 3SG.D place
 ‘S/He_x will sleep at his/her_x place.’ (Heath & Hantgan 2018: 441)

This is the only use that I am aware of in the language of the reflexive pronoun in a possessive function. Note that locative positions such that *next to*, *besides*, *in front of*, etc. use the possessive morpheme followed by a postposition and not the reflexive noun (or pronoun).

For some reflexive constructions such as those given in (43–45), speakers preferred the use of the reflexive noun to that of the reflexive pronoun described in §4.2.

- (43) *n̄* *dá* *digā* *n̄=dīgà* *n̄=dēgē* *wáj*
 1SG.A 1SG.IPFV talk.INDF 1SG.B=talk.1SG.IPFV 1SG.B=head.1SG.POSS RSLT
 ‘I am talking to myself.’ [Survey, AD2020-01-15, Line 11]

- (44) *n̄* *jùrà* *n̄=dēgè*
 3SG.A kill.3SG.PFV 3SG.B=head.3SG.POSS
 ‘S/he killed her/himself.’ [Survey, AD2020-01-15, Line 12]

- (45) *n̄* *pónd̪ə* *n̄=dégé*
 1SG.A hate.1SG.PFV 1SG.B=head.1SG.POSS
 ‘I hate myself.’ [Survey, AD2020-01-15, Line 13]

Thus, the reflexive noun is the favored coreference strategy when used with verbs that can be considered to be otherwise hetero-directed (cf. Puddu 2021: 372, or the autopathic domain as defined by Haspelmath (2023: §8 [this volume])). In the following subsection, (§4.2), the reflexive pronoun is shown to be used with a middle type of meaning as depicted in Kemmer (1994).

4.2 Reflexive pronoun

The second strategy for indicating coreference between a participant in object role and its antecedent in subject role is to take a Set D form as indicated above in Table 1, which, in all persons except second, is *mi(i)*. Such reflexive pronouns can also be used in middle functions. As expected on the basis of Kemmer (1994), Bangime uses the reflexive pronoun with self-directed verbs such as bodily care, verbs of posture (or change of posture), motion, and emotion. Some examples of this type of verb are given in the third person singular form in Table 5.

Table 5: Middle-like verb phrases

Gloss	IPFV	PFV	PRF/RSLT
'hide'	<i>mī̄ n=dāàndà</i>	<i>dāàndà mī̄</i>	<i>n dāāndī mī̄ ḥ=kē</i>
'stretch'	<i>mī̄ m=bōrndà</i>	<i>bōrndà mī̄</i>	<i>m bōrndī mī̄ ḥ=kē</i>
'scratch'	<i>mī̄ ḥ=kōgōjò</i>	<i>kōgōjò mī̄</i>	<i>kōgōjī̄ ḥ=kē</i>
'lie straight'	<i>mī̄ m=bāràgà</i>	<i>bāràgà mī̄</i>	<i>m=bārgì wáj</i>
'lean'	<i>m=pēgē mī̄</i>	<i>pēgērē</i>	<i>pēgērē</i>
Gloss	VBLN	IPFV	PFV
'bathe'	<i>mī̄ n=tùrā</i>	<i>mī̄ n=tùrā</i>	<i>tùū mī̄</i>

In Bangime, these verbs obligatorily take the reflexive pronoun in object position. This type of reflexive or middle marking is discussed in Haspelmath (2023: §5.2 [this volume]) as belonging to the category of reflexive voice markers. The verbal noun 'bathing' also necessitates the presence of the reflexive pronoun and is identical to its use in the imperfective aspect; compare (46) with (47).

- (46) à bòw dà ***mī̄*** n=tūrā
2SG.A father.2SG.POSS 3SG.IPFV 3SG.D 3SG.B=bathe.3SG.IPFV
'Your father is bathing.' [Survey, AD2020-01-15, Line 3]

- (47) nè ***tùū*** ***mī̄***
1PL.A 1PL.B=bathe.1PL.PFV 1PL.D
'We bathed.' [Survey, AD2020-01-15, Line 4]

Although most of the verbs that are formed with the reflexive pronoun, or voice marker, are of the type described by Kemmer (1994), some idiomatic uses do involve more typically active verbs such as those depicted in (48–51).

- (48) *màà níñw ï=kóó ní=tāyā mī*
 3SG.POSS mouth.POSS 3SG.B=PFV 3SG.B=take.3SG.PFV 3SG.D
 ‘His mouth slipped [lit. took himself, fig. spoke inappropriately].’
 [Narrative, NB2010-07-16, Line 25]
- (49) *ā gòndi-èè ï=kóó ní=tāyā mī ï=kè*
 DEF jackal.DEF-DIM 3SG.B=PFV 3SG.B=take.3SG.PFV 3SG.D 3SG.B=PRF
 ‘The jackal has left [lit. has taken himself].’ (Narrative, Hantgan 2013: 401)

The pronoun *mii* appears throughout my corpus of texts in which it is translated with either a reflexive, as exemplified in (50), or a middle, (51), meaning.

- (50) *η kóó á bùyù-mí=ndé tígé nī η=kòò jérò nùùñwà mī*
 3PL.B PFV DEF Bounou.DEF-DYM=PL also 3PL.A 3PL.B=PFV become.3PL.PFV
 prepare.3PL.PFV 3PL.D
 ‘The people of Bounou, they also prepared themselves.’ [Narrative,
 SD2010-10-01, Line 10]
- (51) *à yñw máá mī*
 DEF rain.DEF like.3PL.PFV 3PL.D
 ‘The rain (gods) were pleased.’ [Narrative, SD2013-03-29, Line 11]

To my knowledge, this example does not imply a reflexive reading such as ‘they, themselves, were pleased’. However, in the next section, (§5), focus and intensifying constructions using the reflexive noun are discussed.

5 Focus and intensifying constructions

The reflexive pronoun can be combined with the reflexive noun to convey an intensified meaning in the sense of König & Siemund (2000). Two textual examples are provided in (52–53).

- (52) *mí dégé jáátì mí nànà*
 1SG.C head.1SG.POSS definitely 1SG.C take.1SG.PFV
 ‘Me, myself definitely, I [lit. ‘it is me (who)’] married [lit. ‘took’] (her).’
 [Narrative, TB2010-10-20, Line 185]
- (53) *mì kéndé mā nìñà ā dégé kòmè*
 3SG.C say PROH say.2SG.PFV 2SG.B head.2SG.POSS slave.INDF
 ‘He said, “do not say that you, yourself, are a slave.”’ [Narrative,
 TB2010-10-20, Line 201]

As in English, another use of the reflexive noun is that of doing something for (54), or by (55–56), oneself.

- (54) *m máárà à kùwò ñ=dégré wāj*
 1SG.A build.1SG.PFV DEF house.DEF 1SG.B=head.1SG.POSS DAT
 ‘I built the house for myself.’ [Survey, AD2020-01-15, Line 10]

- (55) *∅ tɔpjw ñ=dégré ñ=tērō màà*
 3SG.A alone 3SG.B=head.3SG.POSS 3SG.B=sit.3SG.PFV 3SG.POSS
kúwò ñ=kò
 house.3SG.POSS 3SG.B=LOC
 ‘He lived by himself in his house.’ [Survey, AD2010-10-30, Line 2]

- (56) *mí ñ=dégré máárà à kùwò*
 1SG.C 1SG.B=head.1SG.POSS build.1SG.PFV DEF house.DEF
 ‘I built the house by myself.’ (Elicit, Heath & Hantgan 2018: 443)

Described by König & Gast (2002: 8–9) as adverbial uses of ‘self-forms’, this additional use of the reflexive noun is defined as the reflexive adverb in Haspelmath (2023: §5.4 [this volume]).

6 Conclusions

According to the criteria provided by Haspelmath (2023 [this volume]), Bangime utilizes two productive strategies for expressing coreference between clause participants: in all the persons except second singular and plural, a special morpheme *mii* is used which may be diachronically related to the third person singular object personal pronoun *m(i)i*. The other option in the language is to use a possessed form of the word for ‘head’, but this construction does not use the possessive morpheme that is usually used in the language but rather a pronominal index that is otherwise only found with kin terms for the purposes of possession. Frequency counts have not yet been obtained from the corpus; it appears that each option is robustly used, but, based on comments from speakers and observations put forth here, the two options seem to be semantically differentiated.

Bangime has a striking feature of multiple markers of subject throughout a phrase: subject marking occurs as the initial constituent of a clause, pre-verbally, and also, when present, before an auxiliary. Even if these markers are represented by null-morphemes, tones serve to signify the subject of the clause. Additionally, Bangime may be considered a pro-drop language in that object pronouns may be pushed to the end of a phrase or even omitted, but the reflexive pronoun remains intact to the clause in question.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

AGENT	agentive	RSLT	resultative
DIM	diminutive	VBLN	verbal noun
DYM	demonym		

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Chapter 4

Reflexive constructions in Hausa

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This contribution describes reflexive constructions in Hausa (Chadic, Niger, Nigeria). The reflexive pronouns are based on the word *kâi* ‘head, self’, in a possessive construction with a person affix that is coreferential with the clause subject (or sometimes with a preceding direct object or applied object). Subject-coreferential direct objects or applied objects are almost always expressed as reflexive pronouns (with the partial exception of the direct objects of some mental/sensation verbs). Subject-coreferential possessive NPs can optionally be expressed as reflexive pronouns but with an emphasis on the possessive relation. Subject-coreferential locative, benefactive, and instrumental/associative NPs are normally expressed as non-reflexive pronouns but they can also be optionally expressed as reflexive pronouns. The chapter also describes three different constructions that are related to the typical reflexive construction and which may be relevant for an account of its development.

1 Introduction

Hausa (Chadic, Niger, Nigeria) generally requires a distinctive marking for coreference between a subject NP and another NP in the minimal clause, in particular when the second NP is a direct object, an applied object, and, optionally, an adnominal possessive pronoun, or the object of certain prepositions. This distinctive marking, the reflexive pronoun, is built on the noun *kâi* ‘head, self’ combined in a possessive construction with a person suffix referring to the antecedent (e.g. *kâ-n-shì* ‘himself’, lit. [self-of.M-3SG.M]). An example is given in (1).

- (1) *Yaa bugè kânshì.*
3SG.M.COMPL hit REFL.3SG.M
'He hit himself.'



In sentence (1), the person/tense/aspect marker *yaa* (or ‘subject pronoun’ in Hausa linguistics) is coreferential with the person suffix *-shi*, which is embedded in a possessive construction with the noun *kâi* ‘head, self’, forming the reflexive pronoun *kânsì* ‘himself’. According to Newman (2000: 529) reflexive pronouns based on a word (ultimately) meaning ‘head’ are widespread among Chadic languages.

This chapter describes the reflexive construction in Hausa, drawing heavily on Newman (2000), who gives the most detailed and exhaustive account of the construction in the language. The chapter also relies on the translation of the questionnaire sentences (Janic & Haspelmath 2023 [this volume]), submitted to the judgment of informants (40 years old and up), as well on data from published sources or collected otherwise, as indicated. The chapter also uses sentences constructed by the author, which are then checked with other native speakers. The data are based on the Katsinanci dialect. Katsinanci was the dialect of precolonial Katsina State, the territory of which today straddles the border between the Republic of Niger (towns of Maradi and Tessaoua) and the Federal Republic of Nigeria (town of Katsina; see the map in Figure 1). It is in a central position between the two main Hausa dialectal clusters, the western and the eastern dialects, but it shares more features with the western dialects (see Wolff 1993: 7; Newman 2000: 1).¹

The chapter is structured as follows. §2 gives the overview of the pronominal system in Hausa. §3–§4 describe, respectively, the coreference patterns between the subject and the direct object and those between the subject and other syntactic functions. §5 outlines the coreference patterns between non-subject NPs. §6 describes two types of self-intensifiers in Hausa. Finally, §7 discusses the word *kâi* in its usage as ‘self, oneself’ in compounds and fixed expressions.

2 Overview of Hausa personal pronouns

Hausa distinguishes various sets of pronouns depending on their syntactic function: the independent pronouns (with a long final vowel or with two syllables), the object pronouns with a reduced form (monosyllabic, and with a short final vowel), and the subject pronouns which combine (and are sometimes fused) with

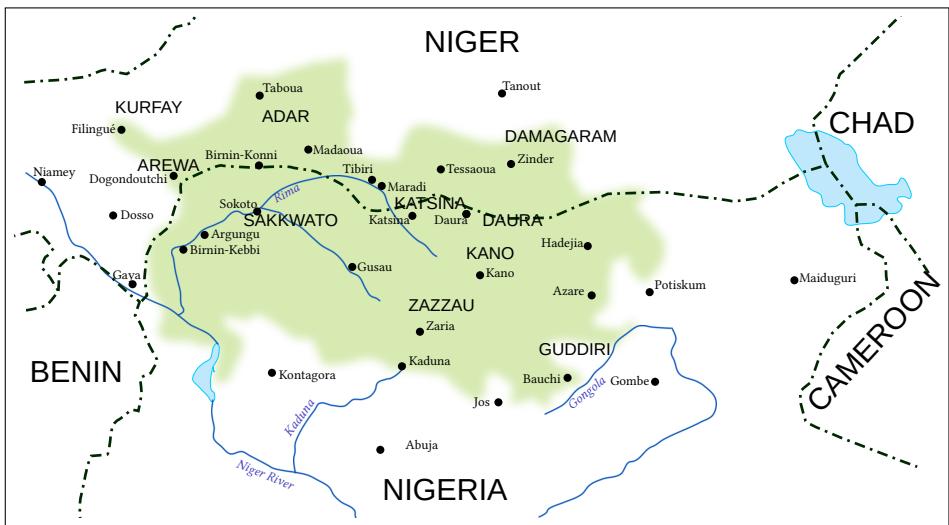
¹The transcription in this chapter follows the Hausa orthography, with some changes. Long vowels are represented as double letters, low tone as grave accent and falling tone as circumflex accent. High tone is unmarked. The symbol ‘r̥’ represents an alveolar trill distinct from the flap ‘r’. Final ‘r̥’ generally assimilates to the following consonant. Written ‘f’ is pronounced [h] (or [hw] before [a]) in Katsinanci and other western dialects.

the tense/aspect markers. Some of the sets of pronouns are illustrated in Table 1 (see Caron 1991: 72ff; Newman 2000: 476ff for more details).

The independent pronouns appear in isolation, in topicalization, in nominal emphasis (e.g. *ita Maariyaa* ‘as for Maria’), or as objects of some prepositions (e.g. *dà ita* ‘with her/it’). Direct object pronouns immediately following a verb assume a reduced form with a low or a high tone, as indicated in Table 1 (the forms *shi* vs. *ya* for the 3rd person masculine singular are free variants). Besides the regular 1st, 2nd, and 3rd person, the subject pronouns also have an impersonal form, with usages similar to French *on*, and for which there are no corresponding independent or direct object forms, as indicated. Since the subject pronouns are often morphologically fused with the tense/aspect markers, they are generally obligatory, whether or not a noun subject is specified in the clause.

However, possessive pronouns are the pronouns most relevant for the structure of the reflexive markers, in particular the adnominal ‘Noun-of-Pronoun’ possessive constructions, which can have both a possessive and a reflexive meaning with the noun *kâi* ‘head, self’, as seen in Table 2 for the Katsinanci dialect.

To better show the structure of the possessive constructions in Hausa, the first column of Table 2 gives the full ‘Noun-of-Noun’ constructions, where a masculine singular possessee noun (*kâi* ‘head’) combines with a masculine and a feminine possessor noun (*Abdù* and *Maariya*, respectively). In this column, the nouns are syntactically linked by a pronoun that refers and agrees in gender and number with the possessee noun *kâi* (with a feminine possessee noun, the linking pronoun would be *ta* [that.of.F], as in *mootàa ta Abdù* ‘the car of Abdu’, lit. [car that.of.F Abdu]; all plural possessee nouns use the pronoun *na*; also, the ‘Noun-of-Noun’ constructions have reduced versions *kâ-n Abdù* ‘head of Abdu’/*mootà-r Abdù* ‘car of Abdu’ (which do not concern us here)). In the second column, the noun *Abdù* is replaced with a possessive pronoun, either *shì/sà* or *yà* [SG.M] (cf. Table 1). In the full ‘Noun-of-Pronoun’ constructions of the second column, a possessive pronoun replaces the possessive noun (lit. ‘head of him/her’). These constructions are reduced in the third column in two ways: If the linking pronoun is reduced (*na* > *-n*), then the derived form is ambiguous between a possessive and a reflexive form, as indicated. If, on the contrary, it is the possessive pronoun that is reduced (*shì/sà* > *-s*) then only the possessive meaning is possible. When the variant *yà* is used, as seen in the second row of the second column, again for many speakers, the resulting reduced forms do not have a reflexive use in Katsinanci dialect, no matter the reduction pattern followed (the western dialects, which only have the *kâinâi* form, also use it as reflexive pronoun; see Caron 1991: 74; see also the discussion in §7). With the 3rd person feminine singular pronoun *tà* (in the last row of Table 2), only the linking pronoun reduction



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Figure 1: Hausa language and its dialectal areas, based on Newman (2000)

Table 1: Some Hausa pronominal paradigms

Pronouns					
Person	Independent	Direct object	Completive subject	Future subject	
1SG	<i>nii</i>	<i>ni/nì</i>	<i>naa</i>	<i>zaa nì/zân</i>	
2SG.M	<i>kai</i>	<i>ka/kà</i>	<i>kaa</i>	<i>zaa kà</i>	
2SG.F	<i>kee</i>	<i>ki/kì</i>	<i>kin</i>	<i>zaa kì</i>	
3SG.M	<i>shii</i>	<i>shi/shì (ya/yà)</i>	<i>yaa</i>	<i>zaa shì/zâi</i>	
3SG.F	<i>ita</i>	<i>ta/tà</i>	<i>taa</i>	<i>zaa tà</i>	
1PL	<i>muu</i>	<i>mu/mù</i>	<i>mun</i>	<i>zaa mù</i>	
2PL	<i>kuu</i>	<i>ku/kù</i>	<i>kun</i>	<i>zaa kù</i>	
3PL	<i>suu</i>	<i>su/sù</i>	<i>sun</i>	<i>zaa sù</i>	
IMPRS	—	—	<i>an</i>	<i>zaa à</i>	

Table 2: Attributive possessive constructions in Hausa (3rd person singular, Katsinanci dialect)

Full ‘Noun-of-Noun’	‘Noun-of-Pronoun’	
	Full	Reduced
	<i>kâi naa-shì/naa-sà</i> ‘his head’ (lit. ‘head that.of.M-3SG.M’)	<i>kâ-n-shì/kâ-n-sà</i> ‘his head, himself’
<i>kâi na Abdù</i> ‘head that.of.M Abdu’		<i>kâi-na-s</i> ‘his head’
	<i>kâi naa-yà</i> ‘his head’	<i>kâ-n-yà</i> ‘his head’
		<i>kâi-nâ-i</i> ‘his head’
<i>kâi na Maariyaa</i> ‘head that.of.M Maria’	<i>kâi naa-tà</i> ‘her head’ (lit. ‘head that.of.M-3SG.F’)	<i>kâ-n-tà</i> ‘her head, herself’

is possible and the form is ambiguous between a possessive and a reflexive form. It may be noted that the reduced forms are more frequent than the full forms.

The reflexive forms in Table 2 are clearly ‘Head’ reflexives in Faltz’s (1985: 32f, 44) typology, given their composite nature incorporating a head noun, a linking pronoun, and a possessive pronoun. Nonetheless, they will be referred to as “reflexive pronouns”, following a usage now established in Hausa literature (see also Caron 1991: 74; Newman 2000: 522; Jaggar 2001: 413; but see Wolff 1993: 117 for a different label). Following a recent proposal (Wolff 1993: 117); see also Will 2019). I assume that the meaning of *kâi* as ‘self’ (instead of ‘head’) is the meaning relevant to the reflexive pronouns (see the discussion in §7). Also, to simplify the data presentation, the reflexive pronouns will be glossed globally as ‘REFL’ plus the person features (e.g. *kânshì* [REFL.3SG.M], instead of *kâ-n-shì* [self-of.M-3SG.M]). Finally, although Table 2 focuses on the 3rd person, the pronouns for all persons in Table 1 have corresponding reflexive pronouns, as we will see in the data throughout the chapter. The next section looks at subject/object coreference.

3 Subject and direct object coreference

In conformity with the general tendencies (see Haspelmath 2023: 8 [this volume] and references therein), sentences in Hausa with coreferring subject and direct object require – with a few exceptions – a distinctive reflexive marking. The following subsections present the basic uses of the reflexive pronouns, the contrast between exact and inclusive coreference, the contrast between extroverted and introverted verbs, and the contrast between body-part and whole-body actions.

3.1 Basic uses in subject-object coreference

Nearly all transitive verbs in Hausa require the reflexive form of the direct object when it is coreferential with the subject. This is illustrated in (2).

- (2) a. *Taa yàbi kântà.*
3SG.F.COMPL praise REFL.3SG.F
'She praised herself.'
- b. *Ta-nàa yàbo-n kântà.*
3SG.F-IPFV praise-of.M REFL.3SG.F
'She is praising herself.'
- c. *Mutàanê-n sun kashè kânsù.*
people-DEF 3PL.COMPL kill REFL.3PL
'The men killed themselves.'
- d. *Yaa reenà kânshì.*
3SG.M.COMPL belittle REFL.3SG.M
'He lost confidence in himself/renounced his ambitions.'
- e. *Naa ga kâinaa cikin maduubii.*
1SG.COMPL see REFL.1SG in mirror
'I saw myself in the mirror.'

The sentences in (2) illustrate basic direct object structures. Notably, most Hausa researchers consider that *kântà* in the imperfective sentence (2b), where it appears formally as the “possessor” of the verbal noun *yàboo* ‘praising’, is the sentence’s direct object (it can be focused or questioned like the object of the basic verb *yàbi* ‘praise’ in (2a), but unlike true adnominal possessive nouns like *Abdù* in *gidan Abdù* ‘the house of Abdu’). Except for the verb *ga/gan/ganii* ‘see’ in (2e), the reflexive pronouns in sentences (2) are obligatory. In sentence (2c), like in its English equivalent, the men could have killed themselves deliberately

or by accident, separately or together (mutuality would require the reciprocal marking *juunaa* ‘each other’). When a non-reflexive pronoun is used as direct object, then a disjoint reference interpretation is obligatory. This is illustrated in (3).

- (3) a. *Taa₁* *yàbee tà₂*
 3SG.F.COMPL praise 3SG.F
 ‘She praised her.’
- b. *Mutàanê-n₁* *sun* *kashèe sù₂*
 people-DEF 3PL.COMPL kill 3PL
 ‘The men killed them.’

Sentences (3a–3b) correspond to sentences (2a) and (2c), respectively. One may note that the reflexive pronoun, being morphosyntactically a noun, behaves like regular nouns in triggering the pre-nominal form of the verb (hence the contrast between *yàbi* and *yàbee* ‘praise’; see Newman 2000: 627 for a complete description). Besides typical direct objects, the reflexive pronouns also occur in atypical direct object positions, such as in double object constructions, or as object of complex predicates, as seen in (4–5).

- (4) a. *Taa* *hanà kântà* *kwaanaa.*
 3SG.F.COMPL deny REFL.3SG.F sleep
 ‘She prevented herself from sleeping.’
- b. *Yaa* *biyaa kânshì* *Nairàa goomà.*
 3SG.M.COMPL pay REFL.3SG.M Naira ten
 ‘Ali payed himself ten Nairas.’
- (5) a. *Abdù yaa* *mayar_dà* *kânshì* *waawaa.*
 Abdu 3SG.M.COMPL return.CAUS REFL.3SG.M idiot
 ‘Abdu turned himself into an idiot.’
- b. *Abdù yaa* *maidà* *kânshì* *waawaa.*
 Abdu 3SG.M.COMPL return.CAUS REFL.3SG.M idiot
 ‘Abdu turned himself into an idiot.’

In sentences (4a–4b), the reflexive pronouns are dative/deprivative arguments (*hanà* basically means ‘deny’) and such arguments, when present, are the true direct objects of the verbs, not the theme arguments, which are placed away from the verb. Example (5a) illustrates a complex causative predicate, made up of the basic verb *mayà* ‘replace, repeat’ and the particle *dà* in a close-knit syntax. The

two parts can in fact merge into one word, as shown in the equivalent sentence (5b).

As reported in Newman (2000: 524), a reflexive pronoun can alternate with a coreferential non-reflexive pronoun in direct object position with verbs he characterized as ‘mental/sensation’ verbs. This is illustrated in (6–7).

- (6) a. *Naa ganee ni cikin maduubii.*
1SG.COMPL see 1SG in mirror
'I saw myself in the mirror.'
- b. *Naa ga kâinaa cikin maduubii.*
1SG.COMPL see REFL.1SG in mirror
'I saw myself in the mirror.'
- (7) a. *Sai Bâlkî₁ ta gan tâ_{1/2} cikin fîm.*
The Balki 3SG.F.RP see 3SG.F in film
'Then/suddenly, Balki saw herself in the movie.'
(cf. *Sai Bâlkî ta ga kântâ cikin fîm.*)
- b. *Yâara₁ sun jii sù_{1/2} cikin reediyòo.*
children 3PL.COMPL hear 3PL in radio
'The children heard themselves on the radio.'
(cf. *Yâara sun ji kânsù cikin reediyòo.*)

In examples (6a–6b), in the 1st person, a non-reflexive pronoun can alternate with a reflexive pronoun with the same interpretation. For the 3rd person in (7a–7b), a non-reflexive pronoun can refer to the subject or to some other participant, giving rise to a disjoint reference interpretation. The alternative sentences given with reflexive pronouns are naturally unambiguous. There are, however, some strong restrictions on the alternation. For example, Newman (2000: 524) lists 13 verbs allowing the alternation. Secondly, subject-coreference with a non-reflexive pronoun is more acceptable in the 1st and 2nd person than in the 3rd person. For example, in Katsinanci dialect, the coreferential 3rd person non-reflexive pronoun is restricted to about six verbs: *ganii* ‘see’, *jii* ‘hear, feel’, *soo* ‘want’, *sâamu* ‘find (oneself in a situation)’, *gaanèe* ‘recognize’, and *san* ‘be aware (of one’s own inclinations)’. Also, as hinted at in Newman (2000: 524), the subject-coreferential 3rd person pronoun is also restricted to the Completive (with an anterior value) and the perfective aspect. This is illustrated in (8).

- (8) a. *I-nâà jîi-naa dâazu à cikin reediyòo.*
1SG-IPFV hear-of.M.1SG moment at in radio
'I was hearing myself a while ago on the radio.'

- b. *Su₁-nàa jî-n-sù_{1/2} dàazu à cikin reediyòo.*
 3PL-IPFV hear-of.M-3PL moment at in radio
 ‘They were hearing them a while ago on the radio.’

Examples in (8), in the imperfective aspect, show a contrast between the 1st person in (8a), where a subject-coreferring non-reflexive pronoun is possible, and the 3rd person in (8b), where a disjoint reference interpretation of the pronoun is obligatory. These restrictions are in accordance with the general tendency whereby the 3rd person requires the reflexive marking more than the 1st and 2nd person (for a discussion see Haspelmath 2008: 43 and references cited there).²

3.2 Contrast between exact and inclusive coreference

As reported in Newman (2000: 524), Hausa marks the contrast between exact coreference, e.g. between a singular subject and an agreeing singular reflexive pronoun, and inclusive coreference between a singular subject and a plural reflexive pronoun. This is illustrated in (9).

- (9) a. *Màccê-n₁ taa yàbi kânsù_{1+X}*
 woman-DEF 3SG.F.COMPL praise REFL.3PL
 ‘The woman praised herself and the others in her group.’
- b. *Yaa₁ kaarè kânsù_{1+X} dàgà muugù-n zàrgii.*
 3SG.M.COMPL protect REFL.3PL from serious-of.M charge
 ‘He defended himself and the others in his group against a serious charge.’

Besides the direct object position, Newman (2000: 524) shows that the inclusive reflexive pronoun is also possible in the applied object position (see §4.1 below).

²The intransitive motion verbs *jee* ‘go’ and *zoo* ‘come’ can immediately be followed by a pronoun agreeing with the subject, a pronoun known as the Chadic ‘intransitive copy pronoun’ (the pronoun is more common in other Chadic languages; e.g. *sun jee sù makarantaa*, lit. ‘they went they to school’, see Newman 2000: 479; Jaggar 2001: 407 and references cited there). In another variant of the phenomenon, a possessive pronoun agreeing with the subject is adjoined to nominalized intransitive motion and stance verbs (e.g. *yaa koomàawa-r-shì makarantaa*, lit. [he.COMPL returning-of-him (i.e. he returned) to school]). Reflexive pronouns are not possible in both cases.

3.3 Contrast between extroverted and introverted verbs

Reflexive marking in Hausa is apparently sensitive to the contrast between extroverted and introverted verbs (on this contrast see Haspelmath 2008: 44 and references cited there). With the extroverted verbs, defined as verbs expressing socially antagonistic actions, such as in Hausa *ciji* ‘bite’, *hàlbi* ‘shoot’, etc., reflexive marking is obligatory in case of coreference. This is illustrated in (10).

- (10) a. *Kàree yaa* *ciji kânshì.*
 dog 3SG.M.COMPL bite REFL.3SG.M
 ‘The dog bit itself.’
- b. *Yaarinyà taa* *tsàni kântà.*
 girl 3SG.F.COMPL hate REFL.3SG.F
 ‘The girl hates herself.’
- c. *Dan_siyaasàa yaa* *sòoki kânshì.*
 politician 3SG.M.COMPL criticize REFL.3SG.M
 ‘The politician criticized himself.’
- d. *Soojà yaa* *hàlbi kânshì.*
 soldier 3SG.M.COMPL shoot REFL.3SG.M
 ‘The soldier shot himself.’

Besides the obligatory reflexive marking in all sentences (10), one can also note that extroverted sentences can have a simple ‘Subject + Verb + Object’ structure. By contrast, introverted verbs, defined as verbs expressing body-care actions and the like, may not appear in a simple ‘Subject + Verb + Object’ structure in their autopathic use. This is illustrated in (11).

- (11) a. *Yaaròo ya-nàa* [yì-n] *wankaa.*
 boy 3SG.M-IPFV do-of.M wash
 ‘The boy was washing himself.’
- b. *Yaarinyà taa* *yì wankaa.*
 girl 3SG.F.COMPL do wash
 ‘The girl washed.’
- c. *Yaa* *yì askii.*
 3SG.M.COMPL do haircut
 ‘He had a haircut (at the barber).’ Or: ‘He did a haircut (to himself).’
- d. *Abdù yaa* *sâa kaayaa.*
 Abdu 3SG.M.COMPL put.on clothes
 ‘Abdu got dressed (dressed himself).’

- e. *Abdù yaa shiryàa.*
 Abdu 3SG.M.COMPL prepare
 'Abdu got ready.'

Sentence (11a) is in the imperfective aspect, but the predicate *wankaa* 'wash, bathe, shower' is more like an action noun that is the direct object of an understood generic verb *yi* 'do' (see Newman 2000: 281; Jaggar 2001: 171). Indeed, the underlying *yi* 'do' verb is obligatory when the sentence is in the Completive, as seen in (11b–11c) (in fact even in the imperfective, *yi* is acceptable in the negative, e.g. *bâi yîn wankaa* 'he doesn't wash' or if *wankaa* is modified, e.g. *mun iskè yanàa yî-n wani irìn wankaa* 'we find him washing himself in a peculiar way'). In (11d) the sentence does have the structure 'Subject + Verb + Object' but the object is not coreferential with the subject. Finally in (11e) the sentence is intransitive. In all cases, a reflexive pronoun is not possible. It is possible however to express the introverted action with a reflexive pronoun in the applied object position, as seen in the following (for more on the applied object, see §4.1).

- (12) a. *Yaaròo ya-nàa mà kânshì wankaa.*
 child 3SG.M-IPFV APPL REFL.3SG.M wash
 'The boy is washing by himself/on his own.'
 (= *Yaaròo yanàa wankaa dà kânshì*)
- b. *Yaa yi mà kânshì askii.*
 3SG.M.COMPL do APPL REFL.3SG.M haircut
 'He did a haircut by himself.'
 (= *Yaa yi askii dà kânshì*)

Sentences (12) are used in contexts where it is assumed that the subject referent ordinarily cannot carry out the action but, as it happens, they did (for example a child may be too young to perform the action alone). These sentences, as indicated, are semantically equivalent to the 'by himself' emphatic sentences discussed later in §6.1, but formally they involve a bona fide reflexive pronoun in a verbal argument position, as we will see in §4.1. To summarize, it can be said that overall Hausa clearly marks the contrast between extroverted and introverted verbs, and that only the former regularly require the reflexive pronoun in autopathic contexts.

3.4 Contrast between body-part and whole-body actions

Actions on specified body-parts are expressed in Hausa in a simple 'Subject + Verb + Object' structure, as seen in (13).

- (13) a. *Yaa askè geemèe/ geemè-n-shì.*
3SG.M.COMPL shave beard beard-of.M-3SG.M
'He shaved (himself).' Or: 'He had his beard shaved (at the barber).'
- b. *Yaa wankè kâi/ kâ-n-shì.*
3SG.M.COMPL wash head head-of.M-3SG.M
'He cleaned his head.'
- c. *Yaa wankè jikii/ jiki-n-shì.*
3SG.M.COMPL wash body body-of.M-3SG.M
'He did a quick toilet.' (Lit. 'He cleaned his body.')
- d. *Yaa shaacè kâi/ kâ-n-shì.*
3SG.M.COMPL comb head head-of.M-3SG.M
'He combed his head [hair].'

In sentences (13), simple verbs are followed by their direct objects expressing a body-part. There is hence a clear contrast with whole-body autopathic actions, which are expressed with the verb *yi* 'do' plus a nominal (a verbal or an action noun) specifying the action, as seen in (11–12) above (one may consider sentence (11c) to describe an action viewed holistically although it concerns the head only, in contrast to sentence (13a) with a specified body-part *geemèe* 'beard'). A possessive pronoun referring to the subject can be adjoined to the body-part noun in sentences (13), as indicated, although this is wholly unnecessary in normal contexts. One may note that even with the possessive *kânsì* 'his head', sentences (13b) and (13d) are not really ambiguous, i.e. they do not have the reflexive meaning 'he washed himself' or 'he combed himself', respectively.³ Sentence (13c) illustrates an expression *wankè jikii* 'have a quick toilet' which, despite using the noun *jikii* 'body', in fact refers to the cleaning of the limbs and face. Similarly, in sentence (13d) the hair is combed.

To conclude this section, one can say that in Hausa the use of a reflexive pronoun is obligatory for a direct object coreferential with the subject, except with a few mental/sensation verbs. Hausa also does not allow a reflexive pronoun in subject function.

³Sentence (13b), with *kânsì*, can take the reflexive meaning only in the context of a ceremonial cleansing. For example, in a marriage, a groom is ceremonially 'washed' normally by female relatives (see *sun wankè angòo* 'they washed/cleansed the groom'). But a groom can also choose to retire aside and throw the ceremonial water on himself and, in that case, sentence (13b) with *kânsì* 'himself' can be used to describe the situation. (13b), still with *kânsì*, can also be used in the sense 'he cleared himself (of some accusations).'

4 Coreference between the subject and various semantic roles

Besides the direct object position, reflexive pronouns can also appear in positions not directly governed by the main verb. This section reviews the applied nominal position, the possessive NP, and the objects of various prepositions. The section also looks at long distance coreference cases.

4.1 Recipients and other *mà/wà*-marked applied nominals

The applied nominal is the direct object of the applicative marker *mà/wà*, a free particle that stands in a close-knit syntactic relation with the verb (see Tuller 1984; Abdoulaye 1996; Newman 2000: 280). The applied object assumes a variety of semantic roles, chiefly the recipient role, but also the benefactive, malefactive, locative, and possessor roles, and other minor unspecified roles (most of these roles also have their proper, i.e. non-applied, morphosyntax, as discussed later in this section). Applied nominals that are coreferential with the subject are most naturally expressed as reflexive pronouns, as seen in (14).

- (14) a. *John yaa bâa (wà) kânshì shaawarâa.*
John 3SG.M.COMPL give APPL REFL.3SG.M advice
'John advised himself/changed his mind.'
- b. *Sun aikoo mà kânsù wâsiiķâa.*
3PL.COMPL send APPL REFL.3PL letter
'They sent a letter to themselves.'
- c. *Yaarinyâa taa dafâa mà kântâ àbinci.*
girl 3SG.F.COMPL cook APPL REFL.3SG.F food
'The girl cooked for herself.'
- d. *Yaa zoo yaa ganar mà kânshì àl'amâři-n.*
3SG.M.COMPL come 3SG.M.COMPL see APPL REFL.3SG.M situation-DEF
'He came and saw the situation for himself.'

Sentences (14a–14c) illustrate recipient and benefactive nominals expressed as reflexive pronouns following the applied marker *mà/wà* (the applied marker is normally omitted with the verb *bâa* 'give', as seen in 14a). Sentence (14d) shows that a mental/sensation verb, *ganii* 'see', requires a reflexive applied object pronoun under subject coreference (by contrast, we have seen in the discussion of 6–7 that mental/sensation verbs can allow a non-reflexive subject-coreferential

direct object pronoun). When the non-reflexive pronoun is used in the applied object position, then a disjoint reference reading is normally obligatory, as seen next in (15), unless there is a partial coreference between a singular subject and a plural applied object pronoun, as illustrated in (16).

- (15) a. *John₁ yaa baa shì_{1/2} shaawaràa.*
John 3SG.M.COMPL give 3SG.M advice
'John advised him.'
 - b. *Sun₁ aikoo mà-sù_{1/2} wàsiikàa.*
3PL.COMPL send APPL-3PL letter
'They sent them a letter.'
 - c. **Naa jaawoo ma-nì wàhalàa.*
1SG.COMPL draw APPL-1SG troubles
'I invited troubles on myself.'
- (16) a. *Naa₁ bâa kânmu_{1+x}/ baa mù_{1+x} wàhalàa.*
1SG.COMPL give REFL.1PL give 1PL troubles
'I (uselessly) tired us.'
 - b. *Kaa₁ jaawoo mà kânkù_{1+x}/ ma-kù_{1+x} wàhalàa.*
2SG.M.COMPL draw APPL REFL.2PL APPL-2PL troubles
'You invited troubles on yourself and your associates.'
 - c. *Yaa₁ jaawoo mà kânsù_{1+x}/ ma-sù_{1+x/2} wàhalàa.*
3SG.M.COMPL draw APPL REFL.3PL APPL-3PL troubles
'He invited troubles on himself and his associates.' OR: 'He invited troubles on them.'

Sentences (15a–15c) show that a non-reflexive pronoun in the applied position, despite matching agreement features, cannot be coreferential with the subject. Sentence (15c) in particular shows that the non-reflexive pronoun is not possible even for the 1st person (the same is true for the 2nd person as well). But in plural pronoun constructions, as illustrated in (16a–16b), the 1st and 2nd person may allow a non-reflexive subject-coreferential pronoun in the applied position, while for the 3rd person the reflexive pronoun is strongly preferred by speakers, as seen in (16c).

4.2 Possessive NPs

When a possessive NP is coreferential with the subject, Hausa requires a simple possessive pronoun in basic, pragmatically neutral sentences, as illustrated in (17).

- (17) a. *Taa₁* *dàuki laimà-r-tà_{1/2}*
 3SG.F.COMPL take umbrella-of.F-3SG.F
 'She took her umbrella.'
- b. *John₁* *ya-nàa* *karántà littaafi-n-shì_{1/2}*
 John 3SG.M-IPFV read book-of.M-3SG.M
 'John is reading his book.'
- c. *Maatâ-n₁* *sun* *shaarè daakì-n-sù_{1/2}*
 women-DEF 3PL.COMPL sweep room-of.M-3PL
 'The women swept their rooms.'

As shown in (17), the simple possessive pronoun can be coreferential with the subject or not. Nonetheless, and as Newman (2000: 525) notes, the coreference between the subject and the possessive pronoun can also be expressed as a reflexive pronoun, but with a marked emphasis, as seen in (18).

- (18) a. *Sun* *ginà gida-n-sù*.
 3PL.COMPL build house-of.M-3PL
 'They built their house.'
- b. *Sun* *ginà gida-n* *kânsù/ gidaa na* *kânsù/*
 3PL.COMPL build house-of.M REFL.3PL house one.of.M REFL.3PL
 gida-n-sù *na* *kânsù.*
 house-of.M-3PL one.of.M REFL.3PL
 'They built their own house.'
- c. *Ùbaa-naa* *na* *kâinaa!* (cf. **ùba-n kâinaa*/ **ùbaa na kâinaa*)
 father-of.M.1SG one.of.M REFL.1SG
 'Hey you my dear [for me alone] 'uncle'!'

Sentence (18a), with a non-reflexive pronoun, has a pragmatically neutral interpretation, just like sentences (17). By contrast, sentence (18b) has a reflexive pronoun in a reduced, a full, or a double possessive construction. In all three options, sentence (18b) contrasts with sentence (18a) by being more emphatic and, naturally, the more profuse the formal means used, the greater the emphasis. Indeed in appropriate contexts, the emphasis can even imply an exclusive use by the possessor of the possessed object, beyond the state of possession itself. In particular, the double possessive appositional construction, i.e. the 3rd option in (18b), is the one that mostly implies the exclusive use of the possessed object by the possessor. So, sentence (18c) expresses – jokingly – the exclusive use meaning and the shorter reflexive constructions cannot be used, as indicated

(the expression is used to affectionately greet a familiar – but unrelated – senior person; the senior person greeted can in fact reply *diyyaa-taa ta káinaa* ‘my dear own ‘niece’, i.e. other kin relations can be used, but always between unrelated people). To summarize, Hausa likely does not have genuine reflexive adnominal possessives and sentence (18b) can be compared to English sentences with the emphatic possession marker *own* (see Haspelmath 2008: 51 for discussion).

4.3 Locatives

Hausa uses basic and derived prepositions to express static locative relations. The derived prepositions are generally homophonous with locational nouns that are formally heads of a possessive constructions taking as ‘possessor’ the NP expressing the location ground (see *baaya-n iccèe* ‘behind the tree’, lit. [back-of.M tree]). Most of these possessive constructions have grammaticalized towards a prepositional phrase structure and no longer have the behavioral properties typical of true possessive constructions (see Abdoulaye 2018: 48f). When the location ground NP is coreferential with the subject, a non-reflexive pronoun must be used. This is illustrated in (19).

- (19) a. *Ta₁ mayar_dà yaarò baaya-n-tà₁/ *baaya-n kântà₁*
3SG.F.RP return.CAUS child back-of.M-3SG.F back-of.M REFL.3SG.F
'She moved the child behind her.'
- b. *Ka₁-nàa_dà aikii gàba-n-kà₁/ *gàba-n kânkà₁*
2SG.M-have work front-of.M-2SG.M front-of.M REFL.2SG.M
'You have much work to do [in front of you].'

These sentences show that a locative ground NP coreferential with the subject cannot be a reflexive pronoun. There is hence a contrast between locative phrases based on the possessive construction and genuine possessive constructions which at least admit an emphatic reflexive pronoun optionally. The locative phrases based on the possessive constructions also contrast with locative phrases based on simple prepositions which, sometimes, allow a reflexive pronoun, as noted by Newman (2000: 522f). This is illustrated in (20–21).

- (20) a. *Ta₁ ga wani macìjii kusa gàree tà_{1/2}/ *gà kântà₁*
3SG.F.RP see one snake near on 3SG.F ON REFL.3SG.F
'She saw a snake beside her/herself.'
- b. *John₁ ya ajè littaafii neesà dà shì_{1/2}/ *kânsì₁*
John 3SG.M.RP put.down book away to 3SG.M REFL.3SG.M
'John put a book away from him.'

- (21) a. *Taa₁* *shaafà fentìi gàree tå_{1/2}/ gà kântà₁*
 3SG.F.COMPL rub paint on 3SG.F ON REFL.3SG.F
 'She rubbed paint on her/herself.'
- b. *Sun₁* *jaawoo bårgoo bisà suu_{1/2}/ kânsù₂*
 3PL.COMPL draw blanket on 3PL REFL.3PL
 'They pulled the blanket over them/themselves.'

In sentences (20–21), the particles *gà* 'on' (*gàree* before pronoun), *dà* 'with, and, to' are basic prepositions (without an evident source). *Bisà* 'on, on top of' is derived from the noun *bisà* 'top, sky' (see *bisà-n-shì* 'its top part' or 'on it'), but it can be used without possessive marking and behaves like basic prepositions. Sentences (20) require a non-reflexive pronoun even when subject-coreference is intended, as indicated by the ungrammaticality of a reflexive pronoun. This may be due to the fact that the sentences express a non-contact locative relation. Although this needs to be investigated more, one can see that in sentences (21), which express a contact location, a locative NP, which is coreferential with the subject, can be a reflexive or a non-reflexive pronoun. However, in sentences (21) a non-reflexive pronoun is still the most natural option.

4.4 Benefactives with preposition *don* 'for'

§4.1 showed that benefactive NPs can be expressed as applied nominals. They can also be expressed as objects of the preposition *don* 'for, for the sake of'. Under subject-coreference, the benefactive argument is most naturally expressed as a reflexive pronoun, although the non-reflexive pronoun is also possible. This is illustrated in (22) (see also Newman 2000: 524f).

- (22) a. *Taa₁* *sàyi littaafii don kântà₁/ ita_{1/2}*
 3SG.F.COMPL buy book for REFL.3SG.F 3SG.F
 'She bought a book for herself/for her.'
- b. *Yaaròo₁ yaa* *dafà àbinci don kânshì₁/ shii_{1/2}*
 boy 3SG.M.COMPL cook food for REFL.3SG.M 3SG.M
 'The boy cooked food for himself/for him.'
- c. *Naa* *ginà gidaa don kâinaa/ nii.*
 1SG.COMPL build house for REFL.1SG 1SG
 'I built a house for myself/for me.'
- d. *(To) don kânkà!/ Don kânshì!/ Don kânsù!*
 OK for REFL.2SG.M for REFL.3SG.M for REFL.3PL
 'OK, (that's) your problem!/His problem!/Their problem!'

In sentences (22a–22c) the reflexive pronoun is preferred, even for (22c) with a 1st person pronoun. When a non-reflexive 3rd person pronoun is used, it is naturally ambiguous between subject-coreference and disjoint reference, as indicated. Examples (22d) show that the benefactive phrase with the reflexive pronoun can be used as an idiomatic expression (which can be used by a speaker after hearing someone rejecting sound advice). In this expression, the reflexive pronoun cannot be replaced with a non-reflexive pronoun (i.e. *don kuu* would mean ‘for you’, not ‘that’s your problem’).

4.5 Instrumental, associative and other oblique NPs

In §3.1 (see discussion of sentence 4) we saw that causative Verb-*dà* constructions take true direct objects, which are expressed as reflexive pronouns in subject-coreference contexts. However, *dà* is a multipurpose free particle which, in its basic functions, marks the comitative and the instrumental relations (it also marks ‘and’-conjunction, a function that does not concern us here). In these basic functions, *dà*, like other oblique markers, can optionally take a reflexive complement. This is illustrated in (23).

- (23) a. *Naa gamàa da nii/ kâina.*
1SG.COMPL include with 1SG/ REFL.1SG
'I included myself.'
- b. *Balki₁ taa gamàa dà ita_{1/2}/ kânta.₁*
Balki 3SG.F.COMPL include with 3SG.F/ REFL.3SG.F
'Balki included her/herself.'
- c. *Balki₁ taa yi shaawaràa gàme dà ita_{1/2}/ kânta.₁*
Balki 3SG.F.COMPL do advice about with 3SG.F REFL.3SG.F
'Balki made a proposal concerning her/herself.'

It may be noted that in (23a–23b), the reflexive pronoun is the best option in case of subject-coreference. When a non-reflexive 3rd person pronoun is used, as in (23b–23c), it can be coreferential with the subject or refer to another participant. It may also be noted that the reflexive pronouns in (23) are not emphatic pronouns and one must distinguish them from the adverbial self-intensifier constructions, which are also built with *dà*-phrases (see §6.1).

4.6 Long-distance coreference

When a higher subject is coreferential with an NP in the lower clause, a non-reflexive pronoun is obligatorily used when the second NP is a subject, a direct

object, an applied object, or a prepositional object. In fact, the only cases of long-distance reflexives concern a position inside the adnominal possessive construction or a long-distance coreference mediated by an understood lower subject in a non-finite clause. This is illustrated in the following (sentence 25b adapted from Newman 2000: 523).

- (24) a. *Taa₁* *azà* [(**kàntà₁*) *ta_{1/2}-nàà dà* *ìsàssun kudii*].
 3SG.F.COMPL think REFL.3SG.F 3SG.F-have enough money
 ‘She thought that she had enough money.’
- b. *Yaa₁* *soo Bintà₂ tà* *zàabee shì_{1/3}/ *zàabi kânshì₁*
 3SG.M.COMPL want B. 3SG.F.SBJ choose 3SG.M choose REFL.3SG.M
 zàabi kàntà₂
 choose REFL.3SG.F
 ‘He wanted Binta to choose him/*himself/herself.’
- (25) a. *Yaa₁* *soo Bintà₂ tà* *sàyi hòoto-n* *shì_{1/3}/*
 3SG.M.COMPL want B. 3SG.F.SBJV buy photo-of.M 3SG.M
 kânshì₁
 REFL.3SG.M
 ‘Abdu wanted Binta to buy his picture/his own picture.’
- b. *Abdù₁ yaa* *tàmbàyi Bintà₂* [*hanyà-r* [*kaarè kânshì₁*
 Abdu 3SG.M.COMPL ask B. way-of.F protect REFL.3SG.M
 kàntà₂]]
 REFL.3SG.F
 ‘Abdu asked Binta how to protect himself/herself.’
- c. *Abdù₁ yaa* *tàmbàyi Bintà₂* [*hanyà-r* [*kaarèe shì_{1/3}/ tò_{2/3}*]]]
 Abdu 3SG.M.COMPL ask B. way-of.F protect 3SG.M/ 3SG.F
 ‘Abdu asked Binta how to protect himself/herself/him/her.’

In sentences (24a–24b), the coreferential lower subject (pronoun *ta-* [3SG.F]) and direct object (pronoun *shi* [3SG.M]), respectively, cannot be expressed as reflexive pronouns. By contrast, the coreferential adnominal possessive argument can be a reflexive pronoun but with an emphatic meaning, as seen in (25a). In sentence (25b), the main verb is followed by two object NPs. The second NP (in first brackets) contains a possessive construction with *hanyàa* ‘way’ as head and an adnominal non-finite clause (inner brackets). The direct object of the non-finite clause, when coded as a reflexive pronoun, can refer to main subject (*Abdù*) or the main direct object (*Bintà*). In this case, the referent of the main subject or the

main direct object would, respectively, be understood to be the agent of the verb *kaarè* ‘protect’. When simple pronouns are used as direct objects of *kaarè*, as seen in (25c), then these pronouns can refer to Abdu, Binta, or someone else. If the pronoun refers to Abdu, then Abdu cannot be the understood agent of verb *kaare*, and similarly with Binta. In other words, sentence (25b) may not illustrate genuine long-distance coreference (see the discussion in Haspelmath 2023: 7 [this volume], note 15).

5 Coreference between non-subject arguments

In Hausa, coreference between non-subject arguments is most naturally expressed with non-reflexive pronouns or, alternatively, with a reflexive pronoun. The coreference relation can take place between a direct object, an applied object, or a prepositional object on the one hand, and an adnominal possessive pronoun or a prepositional object, on the other hand. This is illustrated in the following (see also Newman 2000: 523 for similar data).

- (26) a. *Yaa₁* *nuunàa mà Màari₂* *hòoto-n-tà_{2/3}*/ *hòoto-n*
3SG.M.COMPL show APPL M. photo-of.M-3SG.F photo-of.M
kàntà₂
REFL.3SG.F
'He showed Mary her picture/a picture of herself (her own picture).'
b. *Muusaa₁ yaa* *yii wà Abdu₂ zancee gàme dà shii_{1/2/3}*/
Musa 3SG.M.COMPL do APPL A. talk about with 3SG.M
kànshì_{1/2}
REFL.3SG.M
'Musa spoke with Abdu about himself.'

Sentence (26a), with the reflexive pronoun *kàntà*, implies that the photo likely pictures Mary, whereas this reading is not obligatory with the non-reflexive pronoun *tà*. In (26b), the (non-emphatic) reflexive pronoun *kànshì* can only refer to either of the nouns, i.e. *Muusaa* or *Abdu*. The non-reflexive pronoun *shii* can refer to either noun or a third understood participant. Sentence (26b) shows that Hausa reflexive pronouns are not exclusively subject-oriented.

6 Self-intensifiers

We have already seen in §4.2 that adnominal possessive reflexive pronouns can put emphasis on the possessive relation (see *mootàr kànshì* ‘his own car’). New-

man (2000) discusses at length two other emphatic constructions in Hausa that are related to the reflexive constructions and which are referred to in typological studies as adverbial and adnominal self-intensifiers (see König & Siemund 2000: 43). This section is largely based on Newman's account, although I will use the general terminology. The section presents the two types of constructions, in turn.

6.1 Adverbial self-intensifiers

According to Newman (2000: 526), what he calls 'pseudoemphatic' reflexives are prepositional phrases with the preposition *dà* 'with, and, to, etc.' followed by an (apparent) reflexive pronoun which is coreferential with the sentence subject. Semantically, they emphasize the fact that the subject referent did an action or underwent a process on their own, by themselves. This is illustrated in (27–28).

- (27) a. *Yâaraa sun koomâa gidaa dà kâ-n-sù.*
children 3PL.COMPL return home with self-of.M-3PL
'The children returned home by themselves.'
 - b. *Wutaa taa mutù dà kâ-n-tà.*
fire 3SG.F.COMPL die with self-of.M-3SG.F
'The fired died out on its own.'
- (28) a. *Yâaraa dà kâ-n-sù su-kâ koomâa gidaa.*
children with self-of.M-3PL 3PL-RP return home
'The children returned home all by themselves.'
 - b. *Yâaraa sun koomâa gidaa dà gudu/ dà tâimako-n mutâanee.*
children 3PL.COMPL return home with running with help-of.M people
'The children returned home running/with help from others.'
 - c. *tâimako-n kâi (dà kâi)*
help-of.M self with self
'self-help (all by oneself)'

Newman (2000) calls the reflexive-like forms in (27) 'pseudoemphatic' because he believes they are bona fide reflexive pronouns in an adjunct structural position and which are coreferential with the subject. He notes that they typically appear near or at the end of the sentence. He also notes that they can be focus-fronted, just like any other clause constituent, as seen in (28a). Furthermore, (28b) shows

that they can alternate with manner phrases introduced with the same preposition *dà* ‘with, and, to’. Nonetheless, it is clear that the reflexive pronouns in (27–28) signal emphasis and should be characterized accordingly. They are indeed used in contexts where a speaker believes the hearer does not expect the subject referent to be able to carry out the action on their own. Nonetheless, one may not consider them to be true reflexive pronouns. Indeed, example (28c) shows that *kâi* meaning ‘self’ can appear without an adnominal possessive pronoun, i.e. a coreference with an antecedent noun is not required to mark the emphasis. These forms are very likely the Hausa instantiation of the adverbial self-intensifiers and can be glossed literally as ‘with self-of-pronoun’, marking more precisely the emphatic meaning ‘with (just) the self, all alone’ (see König & Siemund 2000: 44 who refer to this use of the intensifiers as the exclusive ‘alone’ use; for more on *kâi* as ‘self’ see next section). Sentence (28a), without the intensifier, would have no implication on how the children returned home. Newman (2000: 529) also notes that for an even greater emphasis, the intensifier can combine with true reflexive pronouns, as seen in (29).

- (29) a. *Bintà taa zàrgi kântà dà kâ-n-tà.*
Binta 3SG.F.COMPL accuse REFL.3SG.F with self-of.M-3SG.F
'Binta charged herself knowingly, deliberately.'
b. *Sun kaaràa wà kânsù kudii (suu) dà kâ-n-sù.*
3PL.COMPL augment APPL REFL.3PL money 3PL with self-of.M-3PL
'They raised their pay all by themselves, deliberately.'

Sentences (29a–29b) have, respectively, a direct object and an applied object reflexive pronoun combined with the emphatic *dà*-phrase, here underlining the deliberate aspect of the action. As Newman (2000: 527) notes, an independent pronoun can optionally precede the *dà*-phrase, as seen in sentence (29b). In such cases, Newman (2000) proposes that the *dà*-phrase is not an independent sentence constituent but is simply adjoined to the pronoun. This construction then comes close to the second type of emphatic reflexive pronouns, which Newman (2000) also believes are adnominal adjunctions, and which are presented next.

6.2 The adnominal self-intensifiers

Indeed, according to Newman (2000), the genuine reflexive-like emphatic pronouns are not sentence-level constituents, that is, they do not fulfill a semantic or syntactic role in the clause. Instead, they always appear in apposition next to a noun or pronoun. Functionally, they seem to signal a scalar ‘even X’/‘X himself’

emphasis or contrast. This is illustrated in the following (see also Newman 2000: 527).

- (30) a. *Bellò (shii) kânshì yaa san bâi_dà gaskiyaa.*
 Bello 3SG.M EMP.3SG.M 3SG.M.COMPL know NEG.3SG.M.have truth
 '[Even] Bello himself knows he is wrong.'
- b. *Sun ruusà makarantâ-r (ita) kântà.*
 3PL.COMPL break.up school-DEF 3SG.F EMP.3SG.F
 'They destroyed the school itself.'
- c. *Dâalibâ-n duk su-kà gudù, àmmaa maalàmî-n shii kânshì ya tsayàa.*
 students-DEF all 3PL-PF run but teacher-DEF 3SG.M EMP.3SG.M
 3SG.M.RP stay
 'The students all ran away, but the teacher himself stood.'

In (30a–30b), the self-intensifier follows the modified noun, with an optional (but preferred) pronoun between the two. The pronoun becomes obligatory if the modified noun is omitted or positioned after (or away from) the intensifier (e.g. *shii kânshì* 'he himself', *shii kânshì Bellò* 'Bello himself'). Consequently, one can easily formally distinguish the adverbial self-intensifier (see §6.1) from the adnominal self-intensifier, no matter their position in the sentence (see discussion of 31–32 below). Semantically, the adnominal self-intensifiers seem to primarily signal emphasis and, secondarily, contrast, but both in the background of a scalar context. For example, sentence (30a) expresses a clear scalar emphasis: i.e. adversaries and all other people, as expected, think Bello is wrong; however, and quite unexpectedly, Bello, too, knows he is wrong. As for sentence (30b), while it can be used in contexts where no other building was destroyed, it nonetheless supposes an understood scalar background, i.e. if a school can be destroyed, then other less important buildings might as well. This account is then similar to the one given in a number of studies, such as Edmondson & Plank (1978), Primus (1992), Kibrik & Bogdanova (1995), as cited in König & Siemund (2000: 47–48), however, reject this type of account, citing as evidence English data on which sentence (30c) is modeled. They would argue that in (30c), it is fully expected that the referent of the marked noun (*maalàmîn* 'the teacher') is the one not afraid to face a danger. Nonetheless for Hausa, it can also be noted that sentence (30c), like sentences (30a–30b), still has a scalar context: the marked noun refers to an entity situated at the higher end of a scale. The only difference is that sentence (30c) expresses a contrast (between the scaled entities 'students' and 'teacher');

see also sentence 32b below). That the adnominal self-intensifiers may express both emphasis and contrast should not be surprising, since in general focus studies too, the same formal means can signal various pragmatic situations (such as when a cleft construction is claimed to signal new information focus, contrastive focus, and exhaustive listing focus). Nonetheless, this preliminary account may not extend to other languages like English, or even crosslinguistically, where the uses of the self-intensifiers are more diverse (see König & Gast 2006: 224) than appears to be the case in Hausa (at least pending further data).

Adnominal self-intensifiers can be reinforced in a number of ways, for extra emphasis. They can also have idiomatic uses. This is illustrated in (31–32).

- (31) a. *Bellò shii dà kâ-n-shì yaa san gaskiyaa.*
Bello 3SG.M with self-of.M-3SG.M 3SG.M.COMPL know truth
'Bello, really he himself, knows the truth.'
 - b. *Bello shii kân_kânsì yaa san gaskiyaa.*
Bello 3SG.M EMP-EMP.3SG.M 3SG.M.COMPL know truth
'Bello, really he himself, knows the truth.'
- (32) a. *Wâyyoo mu(u) kânmu!*
alas 1PL EMP.1PL
'Alas, poor us!'
 - b. *Kee kânkì dà kâ-n-kì zaa_kì kunnà wutaa à nân!*
2SG.F EMP.2SG.F with self-of.M-2SG.F FUT-2SG.F light fire at here
'How come you [who should know better] would light a fire in this place!'

In (31a), the subject noun *Bellò* is followed by a reinforced adnominal self-intensifier *shii dà kânsì*, which clearly contains the adverbial intensifier *dà kânsì* (see §6.1). The pronoun *shii* is obligatory, hence the noun *Bellò* cannot be followed by just *dà kânsì*. Semantically, the modified noun in (31a) is emphasized, as indicated. Sentence (31b) shows that adnominal self-intensifiers can be partially repeated (or, more likely, reduplicated prefixally), for an even greater emphasis. The partial repetition/reduplication device seems not to be available to the adverbial self-intensifiers (in fact to no other reflexive or reflexive-like construction). I will follow Newman (2000: 527) in separating out the two formal types of self-intensifiers and globally gloss the adnominal self-intensifiers as **EMP**, plus the person features (see also discussion of sentences 38 below). Nonetheless, as reported by other researchers (see Wolff 1993: 117), it seems that speakers have come to make the two types of self-intensifiers overlap (see sentence 31a, 32b, but

also sentence 38b below with its double meaning). Sentences in (32) show that adnominal self-intensifiers can partake in fixed or idiomatic expressions (sentences like 32b are generally used for scolding, i.e. the referent of the pronoun *kèe* [2SG.F], in contrast to all other relevant people, should know that fire should not be lit at the place).

In conclusion, Hausa uses forms akin to reflexive pronouns as adverbial and adnominal intensifiers to mark, respectively, the ‘by himself’-action emphasis and the scalar ‘even X’/‘X himself’ emphasis or contrast.

7 The meanings of *kâi* ‘head, self’

In Hausa, as in many other languages in the area,⁴ the word for ‘head’ has many derived meanings, including: ‘intelligence’, ‘consciousness’, ‘mind’, ‘person’, and ‘self, oneself’ (see Will 2019 for a review). Indeed, in Hausa the noun *kâi* ‘self, oneself’, independently of the reflexive pronouns in Table 3, can appear alone in many nominal compounds, semi-fixed verbal expressions, and even proverbs.⁵ Some of the *kâi*-based compounds and idiomatic expressions are illustrated in (33).

- (33) a. *àbu-n kâi/ (àbù) na kâi*
 thing-of.M self thing one.of.M self
 ‘property, wealth, own item’
 b. *kiishi-n kâi*
 jealousy-of.M self
 ‘self-protection’
 c. *sô-n kâi*
 loving-of.M self
 ‘selfishness’

⁴See, for example, Bernard & White-Kaba (1994: 39) for Zarma.

⁵Some *kâi*-based proverbs one can find in dictionaries and the internet are: *iyà ruwa fit dà kâi* ‘saving oneself is the measure of one’s swimming skills’, lit. ‘swimming [is] saving self’ (a proverb used to mean one should first test oneself before claiming an expertise; a variant of which is: *koowaa ya fid dà kâi naa-sà shii née gwànni* ‘whoever saves himself is the expert’, using a full [self that.of.M-3SG.M] possessive construction.); *yábon kâi jaahilcii* ‘bragging is shallowness’, lit. ‘praise of self [is] ignorance’; *gírmán kâi rawánin tsíyaa* ‘pride is destructive’, lit. ‘big-ness of self/head [is] turban of poverty’; *anàa ta kâi bâa a ta kaayaa* ‘one should attend to the most urgent issue first’, lit. ‘while saving the self, one does not care about properties’. The proverbs usually shed the functional words, like copulas (see Newman 2000: 164f), the light verb *yi* ‘do’ (see Newman 2000: 281; Jaggar 2001: 171), or even reduce phonological material (cf. *ruwa* above vs. the full form *ruwaa* ‘water’).

- d. *yii ta kâi*
 do one.of.F self
 ‘save oneself’

The expressions in (33a–33c) are compound nouns which, like any noun, can be used independently of any previously mentioned referent (for example as subject in *sôn kâi yaa yi yawàa gidan nàn* ‘there is too much selfishness in this house’, for the compound in 33c; for a crosslinguistic investigation of the reflexive compounds, see König 2013). Sentence (33d) presents an idiomatic expression. Compounds based on *kâi* ‘self’, both with predictable or less predictable meanings, are numerous. Some frequent examples cited in the dictionaries are: *batân kâi* ‘confusion’, lit. ‘loss of self’; *incin kâi* ‘independence, autonomy’; *sanin ciiwòn kâi* ‘self-care’, lit. ‘knowing of pain of self’ (cf. also *ciiwòn kâi* ‘headache’); *girman kâi* ‘pride, vanity’, lit. ‘big-ness of self’ (though this may also be ‘big-ness of head’); *jîn kâi*, ‘pride, vanity’ lit. ‘feeling of self’; *sâa kâi* ‘volunteerism’, lit. ‘putting self’ (cf. *aikin sâa kâi* ‘voluntary work’); etc. These expressions and compounds can sometimes keep their idiomatic reading even when *kâi* is adjoined to a possessive pronoun (e.g. *kâ-n-shì* [self-of-3SG.M]) referring to the sentence subject. This is illustrated in (34–35).

- (34) a. *Yaara su-kâ yi ta kâ-n-sù.*
 children 3PL-RP do one.of.F self-of.M-3PL
 ‘The children bolted away/escaped threat.’ OR
 ‘The children did their own [chair].’ (i.e. ‘they made one [chair] for themselves’)
- b. *Koo-waa yâ yi ta kâ-n-shì!*
 even-who 3SG.M.SBJV do one.of.F self-of.M-3SG.M
 ‘Every man for himself!’ (cf. Fr. *sauve-qui-peut!*); OR
 ‘May everyone make his own [chair].’
 ‘May everyone follow his own way.’
- (35) a. *Abdù yaa nuunà irì-n [kiishi-n kâ]-n-shì.*
 Abdu 3SG.M.COMPL show type-of.M protection-of.M self-of.M-3SG.M
 ‘Abdu displayed his art of self-protection.’
- b. *Abdù, à yi kiishi-n kâi/ *kâ-n-kâ!*
 Abdu IMPRS.SBJV do protection-of.M self/ self-of.M-2SG.M
 ‘Abdu, you should protect yourself.’

- c. *Abdù, kà yi kiishi-n kâ-n-kà!*
 Abdu, 2SG.M.SBJV do protection-of.M self-of.M-2SG.M
 'Abdu, you should protect yourself.'

Sentences (34) illustrate the expression *yi ta kâi* 'save self' given in (33d). In both sentences (34a–34b) the idiomatic meaning is still recoverable even though *kâi* is adjoined to a possessive pronoun referring to the subject. The sentences however are ambiguous, with possible true reflexive readings, as indicated. Sentence (35a) shows that the compound *kiishin kâi* 'self-protection', too, can take an adnominal possessive pronoun (see also *irìn [kiishin kâ]n Abdù* 'Abdu's way in self-protection', with an adnominal possessive noun). The compound structure is also clear in (35b) where an impersonal subject-pronoun occurs with a specified referent, yet the sentence cannot license an adnominal possessive pronoun. However, with a matching 2nd person subject-pronoun, as in (35c), an adnominal possessive pronoun is possible and one gets a typical reflexive construction, no matter how one might analyze the sequence *kiishi-n kâ-n-kâ* (as a compound 'self-protection of you', or as a reflexive pronoun 'protection of yourself'). The typical reflexive reading is more easily available when the compound or fixed expression has a transparent meaning, as seen in the following case (examples adapted from Newman 2000: 523).

- (36) a. *Abdù yaa tâmbâyi Bintà hanyà-r kaarè kâi.*
 Abdu 3SG.M.COMPL ask Binta way-of.F protect self
 'Abdu asked Binta about how to protect oneself [way of self-protection].'
- b. *Abdù yaa fadâa wà Bintà hanyà-r kaarè kânshi/ kântâ.*
 Abdu 3SG.M.COMPL tell APPL Binta way-of.F protect REFL.3SG.M
 REFL.3SG.F
 'Abdu told Binta about how to protect himself/herself.'

In (36a) with the bare expression *kaarè kai* 'self-protection', the person that needs to protect themselves can be Abdu, Balki, or some other person, while in (36b), with a reflexive pronoun, Abdu (with *kânshi*) or Balki (with *kântâ*) are referred to by the reflexive pronoun, in a typical reflexive construction. Other semantically transparent *kâi*-based compounds and expressions are: *kaa_dà kâi* 'falling all by oneself [self-defeat]'; *kashè kâi* 'suicide' (lit. 'kill self', cf. *kisà-n kâi* 'murder', lit. 'killing-of head/person'); *binciken kâi* 'self-exploration'; *àmfàanin*

kâi ‘self-benefit’ (i.e. doing something for one’s own sake); *tàimakon kâi* ‘self-help’, etc. Some of these can be reinforced with the ‘by himself’ adverbial intensifiers seen in §6.1: *binciken kâi dà kâi* lit. ‘self-exploration by self’, *tàimakon kâi dà kâi* lit. ‘self-help by self’ (see also Newman 2000: 523). As suggested already in §6.1, these reinforced compounds show that both *dà kâi* and *dà kânsì* can mark the ‘by himself’ emphasis. Finally, there is at least one case where *kâi* ‘self’ appears embedded in typical reflexive constructions, i.e. when the plural form *kaawunàà* ‘selves’ is used, as seen in the following (sentence 37a from a radio broadcast and 37b from Jaggar 2001: 383; see also Abdoulaye 2018: 45).

- (37) a. ...*na aamulàà dà tsaftàà dà kuma kaarè kaawunà-n-mù*
 one.of.M practice with hygiene and also protect selves-of.PL-1PL
 dàgà cî-n naamà-n beeràayee...
 from eating-of.M meat-of.M rodents
 ‘...[appeals made to us] for practicing hygiene and protecting
 [restraining] ourselves from eating rodents...’
- b. *Zaa_mù wankè kaawunà-n-mù dàgà zàrgi-n dà a-kèe*
 FUT-1PL clear selves-of.PL-1PL from charge-of.M that IMPRS.RI
 ma-nà.
 APPL-1PL
 ‘We will clear ourselves of the accusation against us.’
- c. *Daya baayan daya, su-kà zwaagè kaawunà-n-sù dàgà harakà-r.*
 one after one 3PL-RP extract selves-of.PL-3PL from matter-DEF
 ‘One by one, they extracted themselves from the matter.’

Sentences in (37), with the plural form *kaawunàà* ‘selves’, have a special semantics. Indeed, they tend to imply individualized actions by many people. This is clear in sentences (37a) and (37c), where it is understood that people performed the action separately and at various times. According to Newman (2000: 485), the building of the reflexive pronouns uses only the singular *kâi* and this claim would be true if indeed it applies only to the reflexive pronouns that solely mark coreference between arguments, that is, without an added semantics or an emphasis. Indeed, if the regular reflexive pronoun *kânmù* ‘ourselves’ (lit. ‘our-self’) is used in (37a–37b), as is possible, then the sentences would not have the individualized actions reading.

Although most Hausa researchers assume that the reflexive pronouns are directly based on the meaning ‘head’ (see Caron 1991: 74; Newman 2000: 529; Jaggar 2001: 413; Pawlak 2014: 147f; for a general proposal in this regard see Faltz 1985:

32f,109f), a few sources have instead explicitly linked the reflexive pronouns with *kai* meaning ‘self’ (e.g. Wolff 1993: 117; Will 2019: 161). The data presented in this section show indeed that the meaning of ‘self’ may be relevant for an account of the development of the typical reflexive pronouns. Self-intensifier forms, too, are sometimes evoked as possible sources of reflexive pronouns (see König & Siemund 2000: 44; Schladt 2000: 105f; and Haspelmath 2023: §11.2 [this volume] for discussions) and this proposal may be relevant for Hausa as well. We have seen in §6 that Hausa has two types of self-intensifiers. There is some evidence in the Katsinanci dialect that adnominal self-intensifiers are formally closer to typical reflexive pronouns than adverbial self-intensifiers. Indeed, adnominal self-intensifiers and reflexive pronouns tend to have less flexibility in their choice of the 3rd person masculine singular pronoun variants, as given in Table 2, and so contrast with adverbial self-intensifiers and the *kai* ‘self’ found in compounds and idiomatic expressions, as seen in (38).

- (38) a. *Koo-waa yà yi ta kâ-n-shì kâ-n-yà/*
 even-who 3SG.M.SBJV do one.of.F self-of.M-3SG.M self-of.M-3SG.M
kâi-nâ-i/
 self-of.M-3SG.M
 ‘Every man for himself!’ (cf. sentence 34b above)
- b. *Bello yaa jee makarantâ-r dà kâ-n-shì/*
 Bello 3SG.M.COMPL go school-DEF with self-of.M-3SG.M
kâ-n-yà/ kâi-nâ-i.
 self-of.M-3SG.M self-of.M-3SG.M
 ‘Bello went to the school by himself.’ (Also: ‘Bello himself went to the school.’)
- c. *Bello yaa ga kânsdì/ ?kânyà/ ?kâinâi cikin*
 Bello 3SG.M.COMPL see REFL.3SG.M REFL.3SG.M REFL.3SG.M in
maduubii.
 mirror
 ‘Bello saw himself in the mirror.’
- d. *Bello shii kânsdì/ ?kânyà/ *kâinai yaa san*
 Bello 3SG.M EMP.3SG.M EMP.3SG.M EMP.3SG.M 3SG.M.COMPL know
gaskiyaa.
 truth
 ‘Bello himself knows the truth.’

- e. *Bello shii kân_kânsì/ *kân_kânyà/ *kân_kâinai*
Bello 3SG.M EMP-EMP.3SG.M EMP-EMP.3SG.M EMP-EMP.3SG.M
yaa san gaskiyaa.
3SG.M.COMPL know truth
'Bello, really he himself, knows the truth.'

As shown in Table 2, the Katsinanci dialect has four reduced variants for the 3rd person masculine singular possessive pronoun, three of which are relevant for our discussion here (the *kâi-na-s* 'his head' variant is marginal even for typical possessive constructions). All speakers consulted agree without hesitation that the three variants are grammatical with *kâi* 'self', as seen in (38a), and with the adverbial self-intensifiers, as seen in sentence (38b). This result, together with the fact that *dà kâi*, lit. 'by self', can alone mark emphasis (e.g. *binciken kâi dà kâi* lit. 'self-exploration by self'), supports analyzing the 'by himself' emphatic constructions as having the literal comitative meaning 'with (just) his self', i.e. 'alone'. By contrast, speakers are less firm in their judgments with the reflexive pronouns and the adnominal self-intensifiers. All speakers consulted immediately favor the form *kânsì* for both constructions, as seen in (38c–38d), respectively. Most consulted speakers tolerate *kânyà* for both constructions. By contrast, *kâinâi* is acceptable for the reflexive pronouns but is rejected by most speakers for the adnominal self-intensifiers. Finally, for all consulted speakers, in sentence (38e), the adnominal intensifier reinforced with partial repetition/reduplication (see sentence 31b above) can only have the *kânsì* form.

8 Conclusions

This contribution has shown that Hausa distinctively marks coreference between the subject and another NP in the same minimal clause using reflexive pronouns formally based on the possessive construction '*kâi + -n + Pronoun*', lit. 'self + of + Pronoun', where the pronoun is coreferential with the clause subject (or sometimes with a preceding direct object or applied object). Subject-coreferential direct objects are almost always expressed as reflexive pronouns (with the exception of the direct objects of some mental and sensation verbs). Subject-coreferential applied objects are also always expressed as reflexive pronouns, except for the 1st and 2nd persons, where a non-reflexive pronoun is possible. Subject-coreferential locative NPs are always expressed as simple pronouns with prepositions derived from location nouns, but they can also be reflexive pronouns with simple, non-derived prepositions. Similarly, prepositional phrases with *dà* 'with,

and' basically accept simple pronouns, but they also allow the reflexive pronouns, particularly in the 3rd person. Subject-coreferential possessive NPs can optionally be expressed as reflexive pronouns but they then have a special 'own'-emphasis on the possessive relation. The chapter also described three different constructions that are related to the typical reflexive constructions: compounds and semi-fixed expressions involving *kâi* 'self', adverbial self-intensifiers marking the 'by himself' emphasis, and adnominal self-intensifiers marking the scalar 'even X'/X himself' emphasis and contrast. These three constructions may be relevant for an account of the origin of the typical reflexive pronouns in Hausa.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

APPL1	applicative 1 (locative or recipient applicative, - <i>an</i>)
APPL2	applicative 2 (benefactive or transferred item applicative, <i>i-</i>)
EMP	emphasis
IMPRS	impersonal
RI	relative imperfective
RP	relative perfective

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Chapter 5

Reflexive constructions in Jóola Fóoñi

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The reflexive constructions of Jóola Fóoñi (an Atlantic language spoken in south western Senegal) are characterized by a sharp distinction between subject-object coreference, which requires the use of derived forms of the verb, and other possible coreference relationships within the clause, which are not treated differently from coreference in discourse. Three verbal suffixes are involved in the coding of subject-object coreference, none of which is specialized in reflexive function: *-ɔɔr* (productive in reciprocal function, very marginally involved in reflexivization), *-ɔ* (productive in decausative and quasi-reflexive function, also used to encode reflexivization with body-care verbs), and *-ɔɔrɔ* (the default marker of subject-object coreference, also used to mark self-intensification of the subject).

1 Introduction

Jóola Fóoñi (a. k. a. Diola-Fogny), spoken in south western Senegal by approximately half a million speakers, belongs to the Bak group of languages included in the Atlantic family (see Figure 1).¹

¹Jóola languages can be divided into Central Jóola, a dialect continuum within the limits of which it is difficult (if not impossible) to decide what is a language and what is a dialect, and peripheral Jóola varieties whose status as separate languages is hardly disputable, in spite of their close relationship to Central Jóola, such as Karon, Kwaataay, Mulomp-North, or Bayot. Jóola Fóoñi is part of the Central Jóola dialect continuum.



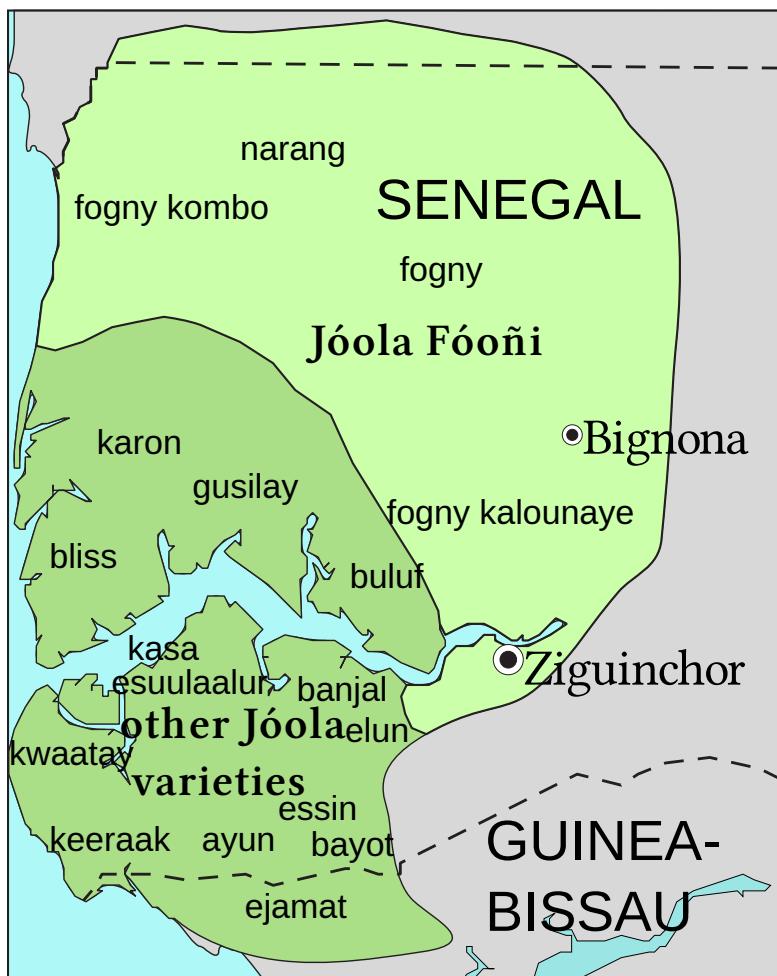


Figure 1: Jóola Fóoñi and the other Jóola languages

Three overall presentations of Jóola Fóoñi grammar are available: Weiss (1939), Sapir (1965), and Hopkins (1995), but none of them includes a discussion of reflexive constructions. The available documentation on the reflexive constructions of Jóola Fóoñi is limited to a few examples of the use of the verbal suffixes *-ɔ* and *-ɔɔrɔ*, designated by Sapir (1965: 51) as “reflexive-descriptive” and “strong reflexive”, respectively. In particular, a crucial property of the suffix *-ɔɔrɔ*, namely the possibility of a non-reflexive use in which it marks self-intensification of the subject, has never been acknowledged before.

In a general way, we base our analysis of Jóola Fóoñi on a corpus of more than twelve hours of recorded naturalistic texts of various genres.² However, in contrast to other morphosyntactic phenomena on which we already worked, and for which our corpus provided abundant data, it turns out that reflexive constructions are very rare in our corpus, and the analysis of reflexive constructions presented in this paper would not have been possible without systematic recourse to elicitation. In fact, most of the examples we quote have been elicited. For this purpose we used the questionnaire (Janic & Haspelmath 2023 [this volume]).

The article is organized as follows. §2 provides background information on Jóola Fóoñi morphosyntax. §3 describes the general principles underlying the expression of coreference within the clause in Jóola Fóoñi, characterized by a sharp distinction between subject-object coreference, which requires verbal marking, and other configurations, which are not treated differently from coreference in discourse. §4 is on the reflexive and non-reflexive uses of the verbal suffixes involved in the coding of subject-object coreference. §5 gives additional precisions on the relationship between reflexivization and self-intensification, which constitutes a particularly original aspect of Jóola Fóoñi. §6 summarizes the main conclusions.

2 Background information on Jóola Fóoñi morphosyntax

2.1 Clause structure

2.1.1 Transitive-intransitive alignment

Like most of the languages of Subsaharan Africa, Jóola Fóoñi has a straightforward ‘nominative-accusative’ alignment system making it possible to define a grammatical relation ‘subject’ on the basis of a set of properties shared by A in the basic transitive construction and the sole argument of semantically monovalent verbs, and a grammatical relation ‘object’ on the basis of a set of properties that distinguish the P phrase in the basic transitive construction from noun phrases fulfilling other roles.

2.1.2 Subjects, objects and obliques

Subjects and objects are equally unflagged. The most obvious property that distinguishes them is that subjects are indexed by means of verbal prefixes, whereas

²The texts have been transcribed by Boubacar Sambou (a graduate student in linguistics who is also a native speaker of the language), and analyzed by Alain Christian Bassène and Denis Creissels with the help of Boubacar Sambou.

objects are indexed by means of verbal suffixes. Moreover, as illustrated in (1), with the verb forms lending themselves to subject indexation, the prefixed subject index is obligatory (even in the presence of a subject NP) whereas object indexation, conditioned by topicality, is equally optional with all verb forms.³

- (1) a. *Eyeney* *ervnrvm* *añulaw.*
 ε-yen-ε-y ε-rvn-rvm a-ñul-a-w
 SG-dog(E)-DEF-clE sI:clE-bite-RDPL SG-child(A)-DEF-clA
 ‘The dog bit the child.’
- b. *Ervmɔɔrvm.*
 ε-rvm-ɔɔ-rvm
 sI:clE-bite-I:clA-RDPL
 ‘It (the dog) bit him (the child).’

Subject NPs consistently precede the verb. The unmarked position for object NPs and obliques is after the verb, as in (2a), but in case of focalization (marked by the use of special verb forms also used in relative clauses), they move to clause-initial position, as in (2b).

- (2) a. *Nijvjvkv* *Musaa.*
 n-i-jv-jvk Musaa
 PPF-sI:1SG-see-RDPL Moussa(A)
 ‘I saw Moussa.’
- b. *Musaa* *nijvkv.*
 Musaa n-i-jvk-ɔ-m
 Moussa(A) PPF-sI:1SG-see-EP-ACT₁
 ‘It is Moussa that I saw.’

³Our transcription of the Jóola Fóoni examples is a broad phonetic transcription that coincides with the official orthography as regards the notation of consonants, but departs from it in the notation of vowels, for which we follow the IPA conventions. This choice is motivated by the fact that the official orthography uses the acute accent to distinguish +ATR vowels from their –ATR counterparts, which may be confusing since accents are more commonly used to indicate word stress or tone. Phonological processes are responsible for variation in the form of some formatives. In particular, ATR harmony is responsible for variation in the vowels of most affixes, as illustrated by the non-subject index of class A, which depending on the context may surface as -ɔɔl, -ooł, -ɔɔ, or -oo. Consonants in coda position are also often affected by phonological processes, as in *ervnrvm* (1a), where the final consonant of *rvm* ‘bite’ is modified in contact with the initial consonant of the reduplicative suffix, or in *nijvjvk* (2a), where the final consonant of *jvk* ‘see’ is deleted for the same reasons.

Obliques are easy to distinguish from objects when they are introduced by a preposition, but unflagged obliques are relatively common in Jóola Fóoñi. However, their indexation properties distinguish them from objects: some obliques cannot be indexed at all, and for those lending themselves to indexation, contrary to objects, the choice of the index is not sensitive to the gender-number of the NP in oblique role, but only to its semantic role. For example, in (3a), *esukey* ‘the village’ is not flagged, which could suggest analyzing it as an object, but if it were the case, it should be possible to substitute the class E index *-yo* for it, since *esuk* ‘village’ governs class E agreement. The fact that, in this sentence, *esukey* can only be represented by the locative class index *-bo*, as in (3b), shows that it must be analyzed as an unflagged oblique rather than as an object.

- (3) a. *Kvjajaw esukey.*
kv-ja-jaw e-suk-e-y
sI:clBK-go-RDPL SG-village(E)-DEF-clE
‘They went to the village.’
- b. *Esukey, kvjajawbo.*
e-suk-e-y kv-ja-jaw-bo
SG-village(E)-DEF-clE sI:clBK-go-RDPL-I:clB
‘The village, they went there.’

In Jóola Fóoñi, there is no strict relative ordering of objects and obliques.

2.1.3 Transitivity prominence

Given that, in Jóola Fóoñi, transitivity is crucial in the conditioning of the expression of coreference within the clause, it is important to mention here that one of the salient typological characteristics of Jóola Fóoñi is its extremely high degree of transitivity prominence (i. e., a very strong tendency to extend transitive coding to verbs whose meaning departs from prototypical transitivity).

Creissels (forthcoming) proposes a questionnaire consisting of 30 verb meanings specially designed to evaluate the cross-linguistic variation in transitive prominence. The verb meanings that constitute this questionnaire are neither among those expressed by transitive verbs in (almost) all the languages for which the relevant data have been checked, nor among those that have a marked tendency to be expressed by verbs assigning other types of coding to their arguments.

Within the limits of this questionnaire, the ratio of transitive coding and other types of coding is for example 29.5 vs. 0.5 for Tswana (Bantu), 23 vs. 7 for Italian,

21 vs. 9 for Yoruba (Benué-Congo), 20.5 vs. 9.5 for Mandinka (Mande), 17 vs. 13 for Basque, 15.5 vs. 14.5 for Russian, 13 vs. 17 for Koroboro Senni (Songhay), and 3 vs. 27 for Akhvakh (Nakh-Daghestanian). Jóola Fóoñi, with a ratio of 29 vs. 1, is among the languages for which this questionnaire indicates an extremely high degree of transitivity prominence.

2.1.4 Multiple-object constructions and the coding of beneficiaries

Another salient characteristic of Jóola Fóoñi, which has consequences for the productivity of voice markers in the expression of coreference within the clause, is the remarkable productivity of multiple-object constructions. In particular, double-object constructions are used not only for semantically trivalent verbs such as *sen* ‘give’ or *yisen* ‘show’, but also for bivalent verbs to which an NP with the semantic role of beneficiary is added.

In contrast to most Atlantic languages, Jóola Fóoñi does not use the applicative strategy to encode beneficiaries,⁴ and does not have a benefactive adposition either: in Jóola Fóoñi, beneficiaries are simply encoded as objects that nothing distinguishes from the objects representing the P argument of transitive verbs. This results in the possibility of transitive constructions of semantically monovalent verbs, as in (4) with *jɔn* ‘set (speaking of the sun)’, and of double-object constructions of semantically bivalent verbs, as in (5) with *wɔnk* ‘call’.

- (4) a. *Begunəb di bɔɔne: “Eenwjaan pan bɔjɔn,*
bɛ-guŋ-ə-b dɪ b-ɔɔnɛ εen-w-jaa pan bɔ-jɔn
SG-genius(B)-DEF-clB SEQ sI:clB-say sI:1SG.say-EP-HYP FUT sI:clB-set
pan bɔjɔn, bare εenwjaan lee bɔjɔn, lee
pan bɔ-jɔn bare εen-w-jaa lee bɔ-jɔn lee
FUT sI:clB-set but sI:1SG.say-EP-HYP FUT.NEG sI:clB-set FUT.NEG
bɔjɔn.”
bɔ-jɔn
sI:clB-set

‘Then the genius said: “If I say that it will set (*balaab* ‘the sun(B)’), it will set, but if I say that it will not set, it will not set.”’

⁴Jóola Fóoñi has a single applicative marker (-*um*) exclusively used to license applied phrases with a proative, instrumental, causal, motivative or mediative semantic role, which constitutes a typologically unusual situation.

- b. *vmooreew* *naanoo:* “*Añulaw*
 e-moori-e-w n-aan-cc a-ñul-a-w
 SG-marabout(A)-DEF-clA PPF-SI:clA.say-I:clA SG-child(A)-DEF-clA
 smε, *lεε* *ba-čεn-cc*
 v-m-ε lεε ba-čεn-cc
 DEM-clA-PROX FUT.NEG SI:clB-set-I:clA
 ‘Then the marabout told her: “This child, he will die by this evening.”’
 lit. ‘It (*balaab* ‘the sun(B)’) will not set (for) him.’

- (5) a. *Niwaŋnwɔnk* *Musaa* *añilaw.*
 n-i-wɔn-wɔnk Musaa a-ñul-a-w
 PPF-SI:1SG-call-RDPL Moussa(A) sg-child(A)-DEF-clA
 ‘I called the child for Moussa.’
 b. *Niwaŋnkɔɔlɔɔwɔnk.*
 n-i-wɔnk-ɔɔlɔɔ-cc-wɔnk
 PPF-SI:1SG-call-I:clA-I:clA-RDPL
 ‘I called him (for) him.’

Given that non-specific P arguments may simply be left unexpressed, the coding of beneficiaries as objects may give rise to ambiguities of the type illustrated in (6).

- (6) *Pan iŋɔɔdi.*
 pan iŋɔɔdi
 FUT SI:1SG-wash-I:clA
 ‘I’ll wash him.’ or ‘I’ll do the washing for him.’

2.2 Nouns and noun phrases

Jóola Fóoñi has a gender system of the type commonly found in Niger-Congo languages, especially among Bantu and Atlantic languages, characterized by a close relationship (which however does not boil down to a straightforward one-to-one correspondence) between the division of nouns into subsets according to the way they express the singular vs. plural distinction, and their division into subsets according to the agreement marks they control on their modifiers or on the pronouns that resume them.

In Jóola Fóoñi, each noun FORM is associated with one of thirteen possible agreement patterns, and genders can be defined as sets of nominal LEXEMES that are associated with the same agreement pattern both in the singular and the

plural. Agreement patterns and genders are conventionally designated here by capital letters that evoke the phonological form of the agreement markers. For example, ‘dog’ as a lexeme belongs to gender E/S, which means that the singular form *ε-yen* ‘dog’ is associated with the agreement pattern E (cf. *ε-yen ε-ceen* ‘some dog’, *ε-yen ε-cila* ‘the aforementioned dog’, etc., to be compared for example with agreement pattern K in *ka-laak kv-ceen* ‘some field’, *ka-laak kv-cila* ‘the aforementioned field’, etc.), whereas the corresponding plural form *si-yen* is associated with the agreement pattern S (cf. *si-yen si-ceen* ‘some dogs’, *si-yen si-cila* ‘the aforementioned dogs’, etc., to be compared with agreement pattern U in *v-laak v-ceen* ‘some fields’, *v-laak v-cila* ‘the aforementioned fields’, etc.).

In our terminology, the term ‘class’ refers exclusively to cells in the morphological paradigm of adnominals and pronouns that can be the target of an agreement mechanism.⁵ For example, *ε-ceen* is the class E form of the determiner *-ceen* ‘some’, and *si-ceen* is the class S form of the same determiner.

The inflectional paradigm of adnominals and pronouns consists of 15 cells. 13 of them are involved in one of the 13 possible agreement patterns for noun forms (and are labeled by means of the same capital letter). The remaining two (class D and class N) are only used pronominally or adverbially with meanings that do not refer to any possible controller: vague reference to things for class D, and time for class N. For example, 13 of the 15 possible forms of the indefinite determiner *-ceen* ‘some’ are found in constructions in which their prefix can be analyzed as an agreement marker (*ε-yen ε-ceen* ‘some dog’, *a-ñil a-ceen* ‘some child’, *u-beer v-ceen* ‘some trees’, *ke-rumbe kv-ceen* ‘some pot’ etc.), but the morphological paradigm of *-ceen* also includes two forms that do not correspond to any noun that could trigger their choice in an agreement mechanism, and can only be used pronominally (*di-ceen* ‘something’) or adverbially (*ni-ceen* ‘sometimes’).

Gender A/BK (agreement pattern A in the singular, BK in the plural) coincides almost perfectly with the set of nouns denoting humans. The other genders are semantically heterogeneous.

Jóola Fóoñi has an enclitic definite article expressing class agreement with the noun to which it attaches.⁶ As illustrated in (7), attributive adjectives agree with their head in definiteness.

⁵For a detailed criticism of the way the term “class” is traditionally used in descriptions of Niger-Congo languages, the reader is referred to Guldemann & Fiedler (2017).

⁶Depending on the stem to which it attaches, the first formative of the enclitic definite article may surface as *-a-*, *-v-*, *-ε-*, or *-e-*.

- (7) a. *bubeer beemek / bubeereb beemekeb*
 bu-beer b-eemek / bu-beer-e-b b-eemek-e-b
 sg-tree(B) clB-big sg-tree(B)-DEF-clB clB-big-DEF-clB
 'big tree'/'the big tree'
- b. *fal feemek / falaf feemekef*
 f-al f-eemek / f-al-a-f f-eemek-e-f
 sg-river(F) clF-big sg-river(F)-DEF-clF clF-big-DEF-clF
 'big river'/'the big river'

Within noun phrases, the general rule is that modifiers follow their head. However, adnominal possessors differ from the other noun modifiers in that they may optionally precede their head. As illustrated in (8), adnominal possessors that follow their head are usually introduced by the genitive linker *-ati* expressing the gender and number of the head, whereas adnominal possessors preceding their head are obligatorily resumed by an index suffixed to their head.

- (8) a. *aseekaw ati Musaa*
 a-sæk-a-w Ø-ati Musaa
 sg-woman(A)-DEF-clA clA-GEN Moussa(A)
 'Moussa's wife', lit. 'the wife that-of Moussa'
- b. *Musaa aseekɔɔ*
 Musaa a-sæk-ɔɔl
 Moussa(A) sg-woman(A)-I:clA
 'Moussa's wife', lit. 'Moussa his wife'

2.3 Verb forms

With the exception of the imperative, in which the 2nd person prefix may optionally be deleted, the verb forms of Jóola Fóoñi consist minimally of a stem and a prefix. The stem may be a root (irreducible lexical element), or a root enlarged by one or more derivational suffixes.

According to the nature of their obligatory prefix, verb forms can be characterized MORPHOLOGICALLY as finite or non-finite:

- in finite verb forms, the obligatory prefix preceding the root is a subject index expressing the person (and in the 3rd person, the gender and number) of the subject argument;

- non-finite verb forms do not include a subject index, and their obligatory prefix characterizes them as belonging to one of the following three types of non-finite forms: infinitive, participle, or converb.

However, this morphological distinction does not coincide with the syntactic distinction between independent and dependent verb forms.

On the one hand, the relative verb forms, whose use is restricted to relative clauses and clauses in which a noun phrase or adverb is focalized, also include an obligatory subject index. They differ from the independent verb forms in the details of their TAM and polarity inflection. Independent verb forms may include TAM markers preceding the subject index, whereas the inflection of relative verb forms is purely suffixal, and includes a special paradigm of three ‘actualizers’ (glossed ACT) that have no equivalent in the inflection of independent verb forms.⁷

On the other hand, the non-finite verb forms as defined above, in addition to uses that justify the labels we use to designate them (infinitive, participle, and converb), can also be used by themselves (i. e., without having to combine with an auxiliary) as the nucleus of independent assertive clauses expressing TAM values distinct from those expressed by morphologically finite verb forms.

2.4 Personal pronouns and indexes

The inventory of personal pronouns and indexes is given in Tables 1 and 2. There is a single morphological paradigm of free pronouns, but two distinct paradigms of indexes. The forms given in these two tables are those that can be considered basic; depending on the contexts in which they occur, they may be modified by regular morphophonological processes.⁸

Note that:

- There is no dedicated subject index of 2nd person plural. 2nd person plural subjects are indexed by means of the class J index (*j*-), which can also be used optionally to index 1st person plural subjects instead of the dedicated 1st person plural index *v*-.
- We do not know the historical explanation of the use of the class J index to represent speech act participants.

⁷The actualizers characterize the event to which the relative verb form refers as irrealis (ACT₀), realis (ACT₁), or having a close relationship with the time of utterance (ACT₀). The ACT₂ marker *-ñaa* results from the grammaticalization of the adverb *ñaa* ‘now’. In its presence, the incomplete aspect is interpreted as expressing present progressive, and the completive aspect is interpreted as expressing recent past.

⁸In particular, in combination with +ATR stems, all the indexes whose underlying form includes a –ATR vowel undergo ATR harmony.

Table 1: 1st and 2nd person pronouns and indexes

	Free pronouns	Subject indexes	Non-subject indexes
1SG	<i>inje</i>	<i>t-</i>	<i>-ɔm ~ -aam</i>
2SG	<i>aw</i>	<i>ɔ-</i>	<i>-t</i>
1PL.EXCL	<i>uli ~ oli</i>	<i>ɔ-</i>	<i>-oli</i>
1PL.INCL	<i>walaal ~ ɔlaal</i>	<i>ɔ-...-aal</i>	<i>-ɔlaal</i>
2PL	<i>mɔyɔɔl ~ tuyɔɔl</i>	—	<i>-ɔɔl</i>

Table 2: 3rd person pronouns and indexes

	Free pronouns	Subject indexes	Non-subject indexes
CL. A	<i>ɔɔ</i>	<i>a-</i>	<i>-ɔɔl</i>
CL. BK	<i>k-ɔɔ ~ bɔk-ɔɔ</i>	<i>k-</i>	<i>-ul</i>
CL. E	<i>y-ɔɔ</i>	<i>ɛ-</i>	<i>-yɔ</i>
CL. S	<i>s-ɔɔ</i>	<i>s-</i>	<i>-sɔ</i>
CL. F	<i>f-ɔɔ</i>	<i>f-</i>	<i>-fɔ</i>
CL. K	<i>k-ɔɔ</i>	<i>k-</i>	<i>-kɔ</i>
CL. B	<i>b-ɔɔ</i>	<i>b-</i>	<i>-bɔ</i>
CL. Ñ	<i>ñ-ɔɔ</i>	<i>ñ-</i>	<i>-ñɔ</i>
CL. U	<i>w-ɔɔ</i>	<i>ɔ-</i>	<i>-wɔ</i>
CL. J	<i>j-ɔɔ</i>	<i>j-</i>	<i>-jɔ</i>
CL. M	<i>m-ɔɔ</i>	<i>m-</i>	<i>-mɔ</i>
CL. T	<i>t-ɔɔ</i>	<i>t-</i>	<i>-tɔ</i>
CL. D'	<i>d-oo ~ r-oo</i>	<i>d- ~ r-</i>	<i>-do ~ -ro</i>
CL. D	<i>d-ɔɔ ~ r-ɔɔ</i>	<i>∅-</i>	<i>-dɔ ~ -rɔ</i>
CL. N	<i>n-ɔɔ</i>	—	<i>-nɔ</i>

- The lack of subject index of class N is due to the fact that there is no noun triggering class N agreement, and class N forms are exclusively used as adverbs.
- Non-subject indexes can be suffixed not only to verbs, but also to nouns (as possessive indexes), to some adnominal particles, and to some adpositions.
- Non-subject indexes suffixed to verbs can index not only objects, but also some obliques. There is however an important distinction: as object indexes, they agree in gender-number with their antecedent, whereas oblique indexes are determined by the function of the oblique phrase they represent (for example, in object function, *esukey* ‘the village’ – gender E/S – is indexed by the E class index *-yo*, whereas the spatial adjunct *di esukey* ‘in the village’ is indexed by the class B index *-bo*).

As illustrated in (9b) (to be compared with the adposessive construction in 9a), with the exception of the two unanalysable stems *-umbe(em)* (1st person singular possessive) and *-uya* (2nd person singular possessive), possessive pronouns (also used as possessive determiners) consist of a class prefix marking agreement with their antecedent or head (the possessee), a stem *-ɔɔl-* (glossed POSS), and a suffixed index representing the possessor.

- (9) a. *vwɔsaw* *wati* *fujicelef*
 v-wɔs-a-w w-at-i fu-jicel-ɛ-f
 PL-ear(U)-DEF-clU clU-GEN SG-male.goat(F)-DEF-clF
 ‘the ears of the male goat’
- b. *wɔɔlfɔ*
 w-ɔɔl-ɔ-fɔ
 clU-POSS-EP-I:clf
 lit. ‘those of it’ (possessee of class U, possessor of class F)

3 Coreference within the clause: general principles

Jóola Fóoni does not have reflexive pronouns or indexes, and does not have logophorics or long-distance reflexives either. This means that coreference relationships within the clause that do not require verbal marking are not treated differently from coreference in discourse, and the same applies to coreference relationships across clause boundaries in complex constructions.

In the examples of coreference within the clause that we have been able to find in our corpus or to elicit, the subject is most of the time one of the two terms of the clause involved in the coreference relationship, and in all cases, the fact that the subject is involved in a coreference relationship with another term of the clause (object, oblique, or adpossessor) has no incidence on its coding.

The most salient characteristic of Jóola Fóoñi with respect to the expression of coreference within the clause is a particularly clearcut distinction between subject-object coreference and all other possible configurations, including subject-oblique coreference and subject-adpossessor coreference:

- Subject-object coreference obligatorily implies verbal marking by means of voice markers that reduce by one the number of objects with which the verb can combine.
- In all the other possible configurations, there is no verbal marking, and one of the two terms of the clause involved in the coreference relationship is encoded in the same way as if it resumed a referent to be retrieved from a previous sentence.

All the voice markers that may be involved in reflexivization have possible functions other than the marking of reflexivization, and the verb forms they are part of may be ambiguous between a reflexive reading and other interpretations.

Note that, given the very high degree of transitivity prominence of Jóola Fóoñi and the extensive use of multiple-object constructions, subject-object coreference in Jóola Fóoñi often corresponds to other syntactic types of coreference in other languages. In particular, with ditransitive verbs, agent-theme coreference and agent-goal coreference are just particular cases of subject-object coreference, and when semantically plausible, are not treated differently from agent-patient coreference with monotransitive verbs. Moreover, the fact that beneficiaries are simply encoded as objects (see §2.1) results in that, in Jóola Fóoñi, auto-benefaction (or agent-beneficiary coreference) is also a particular case of subject-object coreference (see §4.2.4).

Subject-object coreference will be described in detail in §4. For the moment, we limit ourselves to illustrating the following two principles:

- in all the possible coreference relationships within the clause other than subject-object coreference, one of the two terms is encoded by means of pronouns or indexes that are not specialized in the expression of coreference within the clause;

- the possibility of interpreting non-subject pronouns or indexes as having an antecedent within the clause is conditioned by the syntactic hierarchy subject > object > oblique.

In all the examples quoted in the remainder of this section to illustrate coreference relationships within the clause other than subject-object coreference, the pronoun coreferential with another term of the clause can in principle be also interpreted as resuming a referent to be retrieved from the context, although semantically, this latter interpretation is not always equally plausible, and is sometimes totally excluded for semantic reasons.

Example (10) shows that a possessive pronoun modifying an object may have the subject as its antecedent. The same possibility exists for adpossessor indexes attached to objects.

(10)	<i>Nawanwañ</i>	<i>kalaakak</i>	<i>kɔɔla.</i>
	n-a-wan-wañ	ka-laak-a-k	k-ɔɔl-a
PPF-sI:clA-cultivate-RDPL SG-field(K)-DEF-clK clK-POSS-I:clA			
'He _i cultivated his _{i/j} field.'			

This configuration (with an object modified by an adpossessor index or possessive pronoun resuming the subject) is in particular the configuration found with body-care verbs in constructions in which the object noun specifies the body part directly affected by the action, and the affected person is encoded as an adpossessor, as in (11). In such constructions, if the affected person is represented by a possessive pronoun or adpossessor index whose person-gender-number features coincide with those of subject, nothing indicates whether it must be understood as coreferential with the subject, or as resuming a referent to be retrieved from the context:⁹

(11)	a.	<i>Neciiciik</i>	<i>fɔləmpool.</i>
		n-e-cii-ciik	fɔ-ləmp-ɔɔl
PPF-sI:clA-shave-RDPL SG-beard(F)-I:clA			
'He _i shaved his _{i/j} beard.'			
b.		<i>Nakɔkɔf</i>	<i>ukamunool.</i>
		n-a-kɔ-kɔf	u-kemun-ool
PPF-sI:clA-scratch-RDPL PL-leg(U)-I:clA			
'He _i scratched his _{i/j} legs.'			

⁹The object of body-care verbs may also represent the affected person, and in that case, as can be expected from the general rules, coreference with the subject requires reflexive marking on the verb – see §4.3.2.

Example (12) shows that an adpossessor index attached to an oblique may have the subject as its antecedent. In this particular example, a non-coreferential reading is ruled out by semantic considerations.

- (12) *Najvkujvskvbɔ* *di kucilool.*
 n-a-jvsk-uu-jvsk-v-bɔ di ku-cil-ool
 PPF-SI:clA-see-I:clBK-RDPL-EP-I:clB PREP PL-eye(K)-I:clA
 'He_i saw them there with his_i own eyes.'

Examples (13–14) illustrate the possibility that in multiple-object constructions, an adpossessor index or possessive pronoun included in an object phrase has another object as its antecedent.

- (13) *Kat añulaw iñaaaycc!*
 kat a-ñul-a-w iñaaay-cc
 leave SG-child(A)-DEF-clA mother(A)-I:clA
 'Leave the child_i to his_{i/j} mother.'
- (14) *Nisancenccsancen mɔɔla.*
 n-i-sancen-cc-sancen m-ccl-a
 PPF-SI:1SG-speak-I:clA-RDPL clM-POSS-I:clA
 'I spoke with him about him(self).'
 lit. 'I told him_i his_{i/j} (matter)'

Example (15) illustrates the possibility that a possessive pronoun modifying an oblique has an object as its antecedent.

- (15) *Nijvjk ekuuteew di εlvɔɔpey*
 n-i-jv-jvjk e-kuute-e-w di ε-lvɔɔp-ε-y
 PPF-SI:1SG-see-RDPL SG-thief(A)-DEF-clA PREP SG-house(E)-DEF-clE
 yccla.
 y-ccl-a
 clE-POSS-I:clA
 'I saw the thief_i in his_{i/j} house.'

Example (16) shows that an oblique may be the antecedent of a possessive pronoun modifying another oblique.

- (16) *Nayabɔyabo* *dɪ eniineew* *vme*
 n-a-yabɔ-yabo dɪ eniine-w v-m-ɛ
 PPF-SI:clA-get.married-RDPL PREP SG-man(A)-DEF-clA DEM-clA-PROX
mati *sikoorees* *sɔla.*
 mati si-koori-e-s sɔc-a
 because.of PL-money(S)-DEF-cls clS-POSS-I:clA
 'She got married with this man_i because of his_i money.'

Finally, examples (17–18) illustrate subject-oblique coreference.

- (17) *Najɛjvök* *ɛwɛla* *bajandi ɔɔ.*
 n-a-jɛ-jɔk ɛ-wela bajandi Ø-ɔɔ
 PPF-SI:clA-see-RDPL SG-snake(E) near clA-PRO
 'He_i saw a snake near him(self)_{i/j}.'
- (18) *Najanjam* *kawel* *belemukool.*
 n-a-jan-jam ka-wɛl belemuk-ool
 PPF-SI:clA-hear-RDPL SG-noise(K) behind-I:clA
 'He_i heard a noise behind himself_i'

We have not been able to find examples of coreference relationship involving two objects in a multiple object construction, and speakers seem to avoid this configuration, as illustrated for example by the fact that 'X showed Y to self (in the mirror)' is rendered literally as 'X showed Y his/her face (in the mirror)', with the second term of the coreference relationship encoded as an adpossessor.

4 The verbal marking of coreference within the clause

As already mentioned in §3, in Jóola Fóoni, verbal marking by means of voice markers is obligatory in case of subject-object coreference, whereas no verbal marking can be observed in the other possible configurations. In §4.1, we briefly illustrate the reflexive use of the three voice markers involved in reflexive marking (-ɔɔrɔ, -ɔ and -ɔɔr). A detailed description of the reflexive and non-reflexive uses of each of them is provided in §4.2 (-ɔɔrɔ), §4.3 (-ɔ), and §4.4 (-ɔɔr).

4.1 The voice markers involved in reflexive marking

Jóola Fóoni has six verbal suffixes involved in the marking of valency operations, and three of them are involved in reflexive marking:¹⁰

¹⁰The other three are -en 'causative', -um 'applicative', and -i 'passive'.

- *-oɔrɔ* (~ *-ooro* in combination with +ATR verb roots), labeled “strong reflexive” by Sapir (1965);
- *-ɔ̄* (~ *-o* in combination with +ATR verb roots), labeled “reflexive-descriptive” by Sapir (1965);
- *-ɔɔr* (~ *-oor* in combination with +ATR verb roots), labeled “reciprocal” by Sapir (1965).

The behavior of these three suffixes in the inflected forms of the verb including the reduplicative suffix provides decisive evidence that they must be analyzed as voice markers forming part of the verb stem, rather than reflexive indexes.¹¹ The point is that, as illustrated in (19c) for *-oɔrɔ*, they are systematically repeated in the inflected forms of the verb including the reduplicative suffix, like other derivational suffixes forming part of the stem, whereas object indexes occur just once (19a–19b), either before the reduplicative suffix (human object indexes) or after it (non-human object indexes).¹²

- (19) a. *ɛyɛnɛy* *ervnrvmvsfɔ*.
 ε-yen-ε-y ε-rvn-rvm-v-fɔ
 sg-dog(E)-DEF-clE sI:clE-bite-RDPL-EP-I:clf
 ‘The dog bit it (*fujicelef* ‘the male goat’).’
- b. *ɛyɛnɛy* *ervrmɔɔrvm*.
 ε-yen-ε-y ε-rvm-ɔɔ-rvm
 sg-dog(E)-DEF-clE sI:clE-bite-I:clA-RDPL
 ‘The dog bit him (*añulaw* ‘the child’).’
- c. *ɛyɛnɛy* *ervrmɔɔrɔrvmɔɔrɔ*.
 ε-yen-ε-y ε-rvm-ɔɔrɔ-rvmɔɔrɔ
 sg-dog(E)-DEF-clE sI:clE-bite-ɔɔRɔ-RDPL
 ‘The dog bit itself.’

¹¹The reduplicative suffix cannot be analyzed as carrying a particular TAM value by itself, but it is an obligatory element of two non-relative forms of the verb expressing completive aspect and habitual aspect, respectively. It disappears in the corresponding relative forms, for example *kv-re-reg* ‘they said’/ *kv-reg-ε-reg* ‘they say (habitually)’ vs. *kv-reg-ɔ-m* ‘that they said’ (where *-ɔ-* is an epenthetic vowel)/ *kv-reg-ε-m* ‘that they say’.

¹²In the presentation of the examples, the gloss REFL is avoided, because it might be a source of confusion, given that each of the suffixes involved in reflexivization also has non-reflexive uses.

This unambiguously shows that, according to the classification of reflexivizers put forward by Haspelmath (2023 [this volume]), *-ɔɔrɔ* is not a reflexive argument marker, since it cannot be described as alternating in the same slots as object indexes. The only possible interpretation of the data in (19) is that, in the morphological structure of verb forms, *-ɔɔrɔ* occupies a stem-internal slot (and is consequently repeated if the stem is reduplicated), as opposed to the stem-external slot occupied by object indexes, which in the same conditions are not repeated. Additional evidence is provided by a number of suffixes whose presence makes evident that *-ɔɔrɔ* does not alternate with object indexes. For example, the negative suffix *-vt* follows *-ɔɔrɔ* but precedes object indexes (as in *ɛ-yɛn-ɛ-y ɛ-rɔm-ɔɔrɔ-vt* ‘The dog did not bite itself’ vs. *ɛ-yɛn-ɛ-y ɛ-rɔm-vt-ɔɔl* ‘The dog did not bite him (the child)’), and the same can be observed in the presence of *-een* (past marker), *-vlo* (venitive marker), *-ɛ* (incompletive marker), or *-aal* (inclusive marker).

As regards their position with respect to the other formatives that constitute the verb forms of Jóola Fóoni, *-ɔ* and *-ɔɔr* have exactly the same properties as *-ɔɔrɔ*. Accordingly, we conclude that, in the classification of reflexivizers put forward Haspelmath (2023 [this volume]), *-ɔɔr*, *-ɔɔ* and *-ɔɔr* are *bona fide* reflexive voice markers.

In their reflexive function, these three suffixes equally reduce by one the number of objects compatible with the verb in its underived form, and the semantic correlate of this reduction is that the participant roles fulfilled by the subject and (one of) the object(s) in the construction of the base verb are cumulated by a single participant, encoded as the subject of the derived verb. This is illustrated in (20) for *-ɔɔrɔ*, in (21) for *-ɔ*, and in (22) for *-ɔɔr*.

- (20) a. *ɛniineew basɔfɛ epimbeney m'aabvɔj*
ɛ-niine-ɛ-w ba-sɔf-ɛ e-pimben-e-y man a-bvɔj
SG-man(A)-DEF-clA CVB-catch-CVB SG-gun(E)-DEF-clE CSC SI:clA-kill
ɛkuuteew.
ɛ-kuute-ɛ-w
SG-thief(A)-DEF-clA
‘The man took the gun and killed the thief.’
- b. *ɛniineew baraane bɛɛben m'aabvɔjɔɔrɔ.*
ɛ-niine-ɛ-w ba-raan-ɛ b-ɛɛben man a-bvɔj-ɔɔrɔ
SG-man(A)-DEF-clA CVB-drink-CVB SG-poison(B) CSC SI:clA-kill-ɔɔRɔ
‘The man committed suicide (lit. ‘killed himself’) by drinking poison.’

- (21) a. *Nan alaañsl̩m butab,*
 n-an a-laañ-sl̩-m b-ut-a-b
 clN-REL sI:clA-return-VEN-ACT₁ SG-rice.field(B)-DEF-clB
 aseekaw napcs añulaw.
 a-see-k-a-w n-a-pcs a-ñul-a-w
 SG-woman(A)-DEF-clA PPF-sI:clA-wash SG-child(A)-DEF-clA
 ‘After returning from the rice field, the woman washed the child.’
- b. *Nan alaañsl̩m butab,*
 n-an a-laañ-sl̩-m b-ut-a-b
 clN-REL sI:clA-return-VEN-ACT₁ SG-rice.field(B)-DEF-clB
 aseekaw napcs.
 a-see-k-a-w n-a-pcs-ɔ
 SG-woman(A)-DEF-clA PPF-sI:clA-wash-ɔ
 ‘After returning from the rice field, the woman washed (herself).’
- (22) a. *Ijar f̩smbanjaf man uguuy añulaw.*
 ijar f̩s-mbanj-a-f man u-guuy a-ñul-a-w
 take sg-blanket(F)-DEF-clF csc sI:2SG-cover sg-child(A)-DEF-clA
 ‘Take the blanket and cover the child (with it).’
- b. *Ijar f̩smbanjaf man uguuyoɔr.*
 ijar f̩s-mbanj-a-f man u-guuy-oɔr
 take sg-blanket(F)-DEF-clF csc sI:2SG-cover-ɔɔR
 ‘Take the blanket and cover yourself (with it).’

However, none of these three suffixes is specialized in reflexive marking. Moreover, as reflexivizers, they are not interchangeable, and their non-reflexive uses are very different.

4.2 Reflexive and non-reflexive uses of -ɔɔrɔ

4.2.1 -ɔɔrɔ as the default marker of subject-object coreference

The verbal suffix -ɔɔrɔ can be analyzed as the default marker of subject-object coreference, freely available for the transitive verbs that do not belong to a restricted semantic class of transitive verbs that regularly mark subject-object coreference by means of -ɔ (see §4.3), and are not lexically specified as marking subject-object coreference by means of -ɔ or -ɔɔr (see §4.3–§4.4).

4.2.2 *-ccrɔ* and the coding of A-P coreference

The reflexive use of *-ccrɔ* has already been illustrated above with *rvm-ccrɔ* ‘bite oneself’ in (19c) and *bvɔj-ccrɔ* ‘kill oneself’ in (20b). Examples (23–25) further illustrate the use of *-ccrɔ* to derive intransitive verbs expressing agent-patient coreference, and more generally, coreference between the core arguments of mono-transitive verbs.

- (23) *An acesccoratɔl, cc an a-cesccor-ɔt-cc l Ø-cc person(A) sI:clA-chase.away-NEG-I:clA clA-PRO acesccoratɔe. a-cesccor-ccrɔ-ε sI:clA-chase.away-ccrɔ-COMPL*
 ‘Nobody chased him away, he himself decided to leave.’
 lit. ‘it’s him who chased himself away’
- (24) *Nəŋɔelenŋɔelen apacen bɔskaakv, bare n-a-ŋɔelen-ŋɔelen a-pacen bɔsk-aa-kv bare PPF-SI:clA-be.able-RDPL sI:clA-save clBK-other-clBK but aŋɔelenɔt apacenɔɔrɔ. a-ŋɔelen-ɔt a-pacen-ccrɔ sI:clA-be.able-NEG sI:clA-save-ccrɔ*
 ‘He was able to save the others, but not to save himself’
- (25) *Anɔɔsan atebeñɔɔrɔm, Atijamit pan awaleñɔɔl, Ø-anɔɔsan a-teben-ccrɔ-m Atijamit pan a-waleñ-cc l clA-any sI:clA-lift.up-ccrɔ-ACT₁ God(A) FUT sI:clA-bring.down-I:clA bare anɔɔsan awaleñɔɔrɔm, Atijamit pan bare Ø-anɔɔsan a-waleñ-ccrɔ-m Atijamit pan but clA-any sI:clA-bring.down-ccrɔ-ACT₁ God(A) FUT atebeñɔɔl.
 a-teben-cc l sI:clA-lift.up-I:clA*
 ‘Whoever exalts himself, God will humble him, but whoever humbles himself, God will exalt him.’ (from the Jóola Fóoñi translation of the New Testament)

In our data, the coding of A-P coreference by means of *-ccrɔ* is attested by the verbs listed in Table 3.¹³

¹³In the case of polysemous verbs, the translation of the base verb given in this table is that corresponding to the meaning of the reflexive derivate attested in our data.

Table 3: Verbs attesting the use of -ɔɔrɔ to mark A-P coreference

Reflexive verb	Base verb
<i>bəben-ɔɔrɔ</i>	<i>bəben</i> 'calm s.o. down'
<i>bukən-ooro</i>	<i>bukən</i> 'hurt s.o.'
<i>bvɔj-ɔɔrɔ</i>	<i>bvɔj</i> 'kill s.o.'
<i>bvɔnt-ɔɔrɔ</i>	<i>bvɔnt</i> 'fool s.o.'
<i>cesɔɔr-ɔɔrɔ</i>	<i>cesɔɔr</i> 'chase s.o. away'
<i>gamen-ɔɔrɔ</i>	<i>gamen</i> 'judge s.o.'
<i>jɛl-ɔɔrɔ</i>	<i>jɛl</i> 'insult s.o.'
<i>jvɔk-ɔɔrɔ</i>	<i>jvɔk</i> 'see s.o.'
<i>jvɔvər-ɔɔrɔ</i>	<i>jvɔvər</i> 'look at s.o.'
<i>kambən-ɔɔrɔ</i>	<i>kambən</i> 'lock s.o.'
<i>keenum-ooro</i>	<i>keenum</i> 'take care of s.o.'
<i>lat-ɔɔrɔ</i>	<i>lat</i> 'hate s.o.'
<i>manj-ɔɔrɔ</i>	<i>manj</i> 'know s.o.'
<i>manj-ɔɔrɔ</i>	<i>manj</i> 'like s.o.'
<i>nag-ɔɔrɔ</i>	<i>nag</i> 'hit s.o.'
<i>pacən-ɔɔrɔ</i>	<i>pacən</i> 'save s.o.'
<i>pejul-ooro</i>	<i>pejul</i> 'separate s.o. out'
<i>ramben-ɔɔrɔ</i>	<i>ramben</i> 'help s.o.'
<i>rvm-ɔɔrɔ</i>	<i>rvm</i> 'bite s.o.'
<i>sal-ɔɔrɔ</i>	<i>sal</i> 'praise s.o.'
<i>teben-ɔɔrɔ</i>	<i>teben</i> 'glorify s.o.'
<i>walen-ɔɔrɔ</i>	<i>walen</i> 'humiliate s.o.'

4.2.3 -ɔɔrɔ and the coding of agent-goal coreference

Given the extensive use of multiple-object constructions in Jóola Fóoñi, with ditransitive verbs, agent-goal coreference is a particular case of subject-object coreference, and is consequently productively encoded by means of -ɔɔrɔ, examples (26–27).

- (26) *Ujvɔk aw fajɪ n̩slanlaañ umerulooro.*
ʊ-jvɔk aw faɟɪ n̩-s-lan-laañ u-merul-ooro
 SI:2SG-look 2SG.PRO self-2SG PPF-SI:2SG-return-RDPL SI:2SG-answer-ɔɔrɔ
 'Look, you answered your own question yourself again.'
 lit. 'Look, you answered yourself again.'

- (27) *Nimammar man vseenɔrɔ kɔnak kufeeji man*
 n-t-mam-maj man ɔ-sen-ɔɔrɔ kw-nak ku-feeji man
 PPF-SI:1SG-want-RDPL CSC SI:2SG-give-ɔɔrɔ PL-day(K) clK-three CSC
 ɔwɔɔr jak.
 ɔ-wɔɔr jak
 SI:2SG-think well

'I would like you to give yourself three days to think about it well.'

4.2.4 -ɔɔrɔ and the coding of agent-beneficiary coreference

The suffix -ɔɔrɔ is also productively used to encode autobenefaction (i. e., agent-beneficiary coreference), examples (28–29). This is consistent with the fact that, in Jóola Fóoni, beneficiaries are simply encoded as objects.

- (28) a. *Ninɔɔmɛ aseekom ewoto.*
 n-t-nɔɔm-ɛ a-see-k-ɔm e-woto
 PPF-SI:1SG-buy-COMPL SG-woman(A)-I:1SG SG-car(E)
 'I bought a car for my wife.'
- b. *Ninɔɔmɛcunɛ ewoto.*
 n-t-nɔɔm-ɔɔrɔ-ɛ e-woto
 PPF-SI:1SG-buy-ɔɔrɔ-COMPL SG-car(E)
 'I bought a car for myself'
- (29) a. *Fɔk iñes añɔɔlɔm aseek.*
 fɔk i-ñes a-ñɔɔl-ɔm a-see-k
 OBLG SI:1SG-look.for sg-child(A)-I:1SG SG-woman(A)
 'I must look for a wife for my son.'
- b. *Fɔk iñesɔɔrɔ aseek.*
 fɔk i-ñes-ɔɔrɔ a-see-k
 OBLG SI:1SG-look.for-ɔɔrɔ SG-woman(A)
 'I must look for a wife for myself'

4.2.5 -ɔɔrɔ as a marker of self-intensification of the subject

As a valency operator, -ɔɔrɔ is exclusively used to encode reflexivization in one of the configurations illustrated in the previous sections. However, in addition to its use as the default marker of subject-object coreference, -ɔɔrɔ is also productively used as a marker of SELF-INTENSIFICATION OF THE SUBJECT. In this use, -ɔɔrɔ has no incidence on the valency properties of the verb to which it attaches, and its

contribution to the meaning of the clause corresponds to that more commonly expressed cross-linguistically by free intensifying self-forms having scope on the subject, as in *John HIMSELF came* or *John came HIMSELF*.¹⁴

In its function of self-intensification of the subject, -ɔɔrɔ can attach to intransitive verbs, as in (30).

- (30) *Inje iŋjəwɔɔrɔε bɛɛbɔ.*
 injə iŋ-jaw-ɔɔrɔ-ɛ bɛɛ-bɔ
 1SG.PRO SI:1SG-go-ɔɔRɔ-COMPL ALL-I:cLB
 'It's me who went there in person.'

With intransitive verbs, the only possible ambiguity is between self-intensification of the subject and autobenefaction.

With transitive verbs, the choice between the possible interpretations of -ɔɔrɔ (coreference between the subject and another core argument, autobenefaction, or self-intensification of the subject) is partly conditioned by the presence vs. absence of object NPs or indexes. However, the choice between an autobenefactive reading and a self-intensification reading can only rely on the context, since in the autobenefactive use of ɔɔrɔ-verbs, the valency operation is not apparent. For example, in (31a), *kamben-ɔɔrɔ* is interpreted as encoding agent-patient coreference ('lock self'). In (31b), the presence of the object index -kɔ excludes this possibility, but the first part of the sentence is decisive for the choice between the two possible readings 'close s.th. for self' (autobenefactive) and 'close s.th. oneself' (self-intensification of subject).

- (31) a. *Jaw ɔskambenɔɔrɔ di kalimbisak man ɔwɔraŋ.*
 jaw ɔ-kamben-ɔɔrɔ dì ka-lumbis-a-k man ɔ-woraŋ
 go SI:2SG-close-ɔɔRɔ PREP SG-room(K)-DEF-clK CSC SI:2SG-undress
 'Go and lock yourself in the room to change your clothes.'
 b. *Neeŋɔɔ akamben kajɔnkvtak, naane*
 n-eeŋ-ɔɔ a-kamben ka-jvnkv-a-k n-aane
 PPF-SI:1SG.tell-I:cLA SI:cLA-close SG-door(K)-DEF-clK PPF-SI:cLA.tell
iŋjəw ikambenɔɔrɔkɔ.
 iŋ-jaw i-kamben-ɔɔrɔ-kɔ
 SI:1SG-go SI:1SG-close-ɔɔRɔ-I:cLK
 'I told him to close the door, and he told me to go and close it myself.'

¹⁴On the general question of the relationship between self-intensification and reflexivization in typological perspective, readers are referred to Gast & Siemund (2006), König & Gast (2006), and references therein.

In the case of *reg-ɔɔrɔ* < *reg* ‘tell’, the possibility of a reflexive interpretation is widely attested in our data. In Jóola Fóoni, as in many other languages, ‘think’ or ‘imagine’ can be expressed as lit. ‘tell to self’, but in (32), the context is hardly compatible with the agent-addressee coreference reading, leaving self-intensification as the only plausible reading.

- (32) *Uceεŋŋɔɔl, oo let añul, pan aŋoolen*
 u-čeεŋ-ɔɔl Ø-oo Ø-let a-ñul pan a-ŋoolen
 sI:2SG-ask-I:clA clA-PRO sI:clD-not.to.be sg-child(A) FUT sI:clA-be.able
a-reg-ɔɔrɔ.
 a-reg-ɔɔrɔ
 sI:clA-tell-ɔɔrɔ

‘Ask him, he is not a child, he will be able to tell (it) himself.’

Examples (33–36) provide further illustrations of the role of the context in the interpretation of -ɔɔrɔ as expressing autobenefaction or self-intensification of the subject.

- (33) a. *Anaw, tanɔɔsan vlakɔe, ñes man*
 an-a-w t-anɔɔsan v-lakɔ-e ñes man
 person(A)-DEF-clA clT-any sI:2SG-be-ACT₀ try CSC
ukaanɔɔrɔ karees kajake.
 u-kaan-ɔɔrɔ ka-rees k-a-jak-e
 sI:2SG-make-ɔɔrɔ SG-name(K) clK-PTCP-be.good-ACT₀
 ‘Wherever you may be, try to build a good reputation (for yourself).’
- b. *Nan vbajst arambena, fɔk vkaanɔɔrɔ*
 nan v-baj-st a-rambena fɔk v-kaan-ɔɔrɔ
 if sI:2SG-have-NEG SG-helper(A) OBLG sI:2SG-make-ɔɔrɔ
bɔrɔkab buya.
 bɔ-rɔk-a-b b-uya
 SG-work(B)-DEF-clB clB-your
 ‘If you have nobody to help you, you must do your work yourself.’
- (34) a. *Fɔk iñɛsɔɔrɔ aseek.*
 fɔk i-ñɛs-ɔɔrɔ a-seek
 OBLG sI:1SG-look.for-ɔɔrɔ SG-woman(A)
 ‘I must look for a wife (for) myself.’

- b. *Ampaɔm naane man añesɔm*
 a-mpa-ɔm n-aanɛ man a-ñes-ɔm
 SG-father(A)-I:1SG PPF-SI:clA.say CSC SI:clA-look.for-I:1SG
aseek, bare injə neenɔɔ pan
 a-seeɛk bare injə n-εen-ɔɔ pan
 SG-woman(A) but 1SG.PRO PPF-SI:1SG.say-I:clA FUT
iñessɔɔcɔɔ.
i-ñes-ɔɔcɔɔ
 SI:1SG-look.for-ɔɔcɔɔ

‘My father said he would look for a wife for me, but I told him that I will look for (a wife) myself.’

- (35) *Nan aseɛkɔm esumutum, injə*
 n-an a-seeɛk-ɔm e-sumut-u-m injə
 clN-REL SG-woman(A)-I:1SG SI:clA-be.sick-EP-ACT₁ 1SG.PRO
k̥esiilooro.
 k̥e-siil-ooro
 INF(K)-cook-ɔɔcɔɔ

‘When my wife is sick, I do the cooking myself.’

- (36) *Elvɔp̥ey yati iñam umbe, injə*
 ε-lvɔp̥-ε-y y-atu iñam Ø-umbe injə
 SG-house(E)-DEF-clE clE-GEN mother(A) clA-my 1SG.PRO
iñep̥ɔɔcɔɔyɔ.
 i-ñep̥-ɔɔcɔɔ-ε-yɔ
 SI:1SG-build-ɔɔcɔɔ-COMPL-I:clE
 ‘My mother’s house, I built it myself.’

However, it may also happen that the lexical meaning of the verb helps to solve the ambiguity. For example *manj-ɔɔrɔ* < *manj* ‘know’ may be used with the reflexive reading ‘know oneself’, but in (37), the presence of a complement clause excludes this possibility, and the self-intensification reading is the only one really available, since semantically, an autobenefactive interpretation is difficult to imagine.

- (37) *Inje ni manj-ɔɔrɔ manj-ɔɔrɔ manj-ɔɔrɔ*
 injə n-i-manj-ɔɔrɔ-manj-ɔɔrɔ m-an i-ja-ε-m
 1SG.PRO PPF-SI:1SG-know-ɔɔrɔ-RDPL clM-REL SI:1SG-go-ICOMPL-ACT₁

b'εεkaanεy.
 bεε ε-kaan-ε-y
 ALL INF(E)-do-DEF-clE
 'I myself know how I will do (that)'

4.2.6 The lexicalization of *ɔɔrɔ*-derivates

As a rule, *ɔɔrɔ*-derivates are semantically transparent. In this respect, *-ɔɔrɔ* behaves very differently from the other two suffixes involved in the expression of reflexivization, which have a marked tendency toward lexicalization.

There are, however, a few *ɔɔrɔ*-derivates with a lexicalized meaning. For example, *səf-ɔɔrɔ* is attested with two meanings, 'strive to do s.th.' and 'keep from doing s.th.', which cannot be straightforwardly predicted from the meaning of the base verb *səf* 'catch', although it is not very difficult to imagine how they developed from 'catch self'.

Teb-ɔɔrɔ 'invite oneself' (in the sense of 'go s.wh. without having been called') < *teb* 'carry' is another example of lexicalization of an *ɔɔrɔ*-derivate.

4.3 Reflexive and non-reflexive uses of *-ɔ*

4.3.1 The reflexive use of *-ɔ* with body-care verbs

As already illustrated by (21) (reproduced here as 38), the verbal suffix *-ɔ* is used to express a reflexive meaning with body-care verbs, if no particular body part is mentioned and the object represents the person affected by the action (for body-care verbs with a body-part noun in object role, see §3).

- (38) a. *Nan alaañslɔm butab,*
 n-an a-laañ-ɔlɔ-m b-ut-a-b
 cLN-REL sI:clA-return-VEN-ACT₁ SG-rice.field(B)-DEF-clB
aseekaw napɔs añulaw.
 a-see-k-a-w n-a-pɔs a-ñul-a-w.
 SG-woman(A)-DEF-clA PPF-sI:clA-wash SG-child(A)-DEF-clA
 'After returning from the rice field, the woman washed the child.'
 b. *Nan alaañslɔm butab,*
 n-an a-laañ-ɔlɔ-m b-ut-a-b
 cLN-REL sI:clA-return-VEN-ACT₁ SG-rice.field(B)-DEF-clB

<i>aseekaw</i>	<i>naposo</i> .
a-seek-a-w	n-a-pɔs-o
SG-woman(A)-DEF-clA	PPF-sI:clA-wash-o
'After returning from the rice field, the woman washed (herself).'	

In our data, the reflexive use of -o with body-care verbs is attested by the verbs listed in Table 4.

Table 4: Body-care verbs attesting the reflexive use of -o

Reflexive verb	Base verb
<i>bɔŋ-o</i> 'braid (self)'	<i>bɔŋ</i> 'braid (s.th., or s.o. else)'
<i>ciik-o</i> 'shave (self)'	<i>ciik</i> 'shave (s.th., or s.o. else)'
<i>kaan-o</i> 'put (clothes) on self'	<i>kaan</i> 'put (clothes) on s.o. else'
<i>kɔk-o</i> 'tie cloth around the waist'	<i>kɔk</i> 'tie (s.th.)'
<i>ñaaw-o</i> 'bathe (self)'	<i>ñaaw</i> 'bathe (s.o. else)'
<i>pɔs-o</i> 'wash (self)'	<i>pɔs</i> 'wash (s.th., or s.o. else)'

In all cases, it is also possible to have -ɔɔrɔ instead of -o, as in (39).

- (39) *Añulaw* *nerindiinj* *tembe* *yati*
 a-ñul-a-w n-ɛ-rin-diiŋ tembe y-at̪i
 SG-child(A)-DEF-clA PPF-sI:clA-reach-RDPL time(E) clE-GEN
 kapɔɔsɔɔrɔ.
 ka-pɔɔs-ɔɔrɔ
 INF(K)-wash-ɔɔRɔ
 'The child is old enough to be able to wash himself.'

The use of -ɔɔrɔ instead of -o adds to the reflexive meaning an intensifying nuance. Consequently, a possible analysis is that -o is still present underlyingly, but for phonetic reasons, the addition of -ɔɔrɔ to mark self-intensification of the subject makes it invisible.

4.3.2 The reflexive use of -o: isolated cases

In addition to body-care verbs, for which the suffixation of -o is the regular and semantically unmarked way to encode subject-object coreference, -o is used in reflexive function, without any obvious explanation, in the two verb pairs given in Table 5, one of which is formally an equipollent pair.

There may be other similar cases, but these are the only ones we came across.

Table 5: Other verbs attesting the reflexive use of \rightarrow

Reflexive verb	Corresponding non-reflexive verb
<i>lib-ɔ</i> ‘cut self’	<i>lib</i> ‘cut’
<i>rɔɔk-ɔ</i> ‘carry on one’s head’	<i>rɔɔk-en</i> ‘load s.th. onto s.th.’

4.3.3 The quasi-reflexive use of \rightarrow

Jóola Fóoñi has several verbs of spontaneous motion that are formally related to a verb of caused motion in one of the following two ways:

- either the spontaneous-motion verb derives from the caused-motion verb via the addition of \rightarrow (Table 6),
- or the spontaneous-motion and caused-motion verbs share a root not attested by itself as a verb stem, the spontaneous-motion verb being derived from this root via the addition of \rightarrow , and the caused-motion verb via the addition of the causative suffix *-en* (Table 7).¹⁵

Table 6: Spontaneous-motion verbs derived from the corresponding caused-motion verb via the addition of \rightarrow

Spontaneous-motion verb	Caused-motion verb
<i>fim-o</i> ‘turn over on one’s stomach’	<i>fim</i> ‘turn over (pot)’
<i>jup-o</i> ‘embark’	<i>jup</i> ‘load s.th.up, insert into’
<i>lak-ɔ</i> ‘sit down’	<i>lak</i> ‘put (a pot) on the fire’
<i>rup-o</i> ‘emerge from’	<i>rup</i> ‘pull s.th. up’
<i>wεet-ɔ</i> ‘lie on back’	<i>wεet</i> ‘spread out’

This use of \rightarrow can be deemed QUASI-REFLEXIVE, since the relationship between caused motion and spontaneous motion shares important characteristics with the relationship between two-participant events and the corresponding reflexive events, but nevertheless differs from it in some respects. For example, a person who is standing up cannot be described as performing on him/herself the

¹⁵In the case of *wal-en* ‘set down’, it is interesting to observe the contrast between *wal-ɔ* ‘get down’ and *wal-en-ɔɔr* lit. ‘bring self down’ > ‘humble self’, as in (25).

Table 7: Spontaneous-motion verbs marked by \rightarrow corresponding to caused-motion verbs marked by $-en$

Spontaneous-motion verb	Caused-motion verb
<i>fint-ɔ</i> ‘lie down’	<i>fint-en</i> ‘make lie down’
<i>ñit-ɔ</i> ‘climb’	<i>ñit-en</i> ‘hoist up’
<i>pan-ɔ</i> ‘move aside (intr.)’	<i>pan-en</i> ‘move aside (tr.)’
<i>tink-o</i> ‘lean (intr.)’	<i>tink-en</i> ‘tilt, bow’
<i>wal-ɔ</i> ‘get down’	<i>wal-en</i> ‘set down’
<i>yit-ɔ</i> ‘get up, stand up’	<i>yit-en</i> ‘lift s.th. up’

same action as when raising another person or an object. However, the use of lit. ‘raise oneself’ in the sense of ‘stand up’ is attested in a number of unrelated languages, and this extension of reflexive marking to verbs of spontaneous motion has a clear semantic motivation in that a person who is standing up is the instigator of an event whose manifestations concern exclusively his/her own body.

This can be captured by introducing the notion of QUASI-REFLEXIVITY (or AUTOCASATIVITY in Geniušienė’s (1987) terminology) for the following type of relationship between verbs encoding one- and two-participant events:

- the action performed by the unique participant in the one-participant event manifests itself in the same way and has the same result as if it were the affected participant in the two-participant event;
- the unique participant in the one-participant event acts consciously and voluntarily, but in a way that cannot be assimilated to the action performed by the agentive participant in the two-participant event.

In addition to the motion verbs listed above, the use of \rightarrow in the verb pairs in Table 8 meets the definition of quasi-reflexivity.

Table 8: Quasi-reflexive uses of \rightarrow with verbs that are not motion verbs

Quasi-reflexive verb	Base verb
<i>yɔf-ɔ</i> ‘hide self’	<i>yɔf</i> ‘hide s.th. or s.o.’
<i>yokul-o</i> ‘take a rest’	<i>yokul</i> ‘allow s.o. to rest’

4.3.4 The decausative use of -ɔ

As illustrated by the verb pairs in Table 9, in addition to its reflexive and quasi-reflexive use, the verbal suffix -ɔ is fully productive in decausative (or ‘anti-causative’) function.

Table 9: Examples of verbs attesting the decausative use of -ɔ

Decausative verb	Base verb
<i>bembul-o</i> ‘open (intr.)’	<i>bembul</i> ‘open (tr.)’
<i>benen-ɔ</i> ‘increase (intr.)’	<i>benen</i> ‘increase (tr.)’
<i>fɔm-ɔ</i> ‘break (intr.)’	<i>fɔm</i> ‘break (tr.)’
<i>gumbul-o</i> ‘diminish (intr.)’	<i>gumbul</i> ‘diminish (tr.)’
<i>jus-ɔ</i> ‘tear (intr.)’	<i>jus</i> ‘tear (tr.)’
<i>liw-o</i> ‘wake up’	<i>liw</i> ‘wake s.o. up’
<i>loopul-o</i> ‘come off’	<i>loopul</i> ‘take off’
etc.	

In Jóola Fóoñi, -ɔ is not used productively in passive or resultative function, but it is possible to find sporadic cases of transitive verbs whose ɔ-derivate has a passive or resultative rather than decausative meaning. Those we came across are listed in Table 10.

Table 10: Verbs attesting a passive or resultative use of -ɔ

Passive or resultative verb	Base verb
<i>wot-o</i> ‘be known’	<i>wot</i> ‘know’
<i>kvr-ɔ</i> ‘be well-mannered’	<i>kvr</i> ‘educate’
<i>yab-ɔ</i> ‘get married (speaking of a woman)’	<i>yab</i> ‘marry’

4.3.5 Lexicalized uses of -ɔ

The lexicalization of ɔ-derivates can be illustrated by the verb pairs in Table 11.

Table 11: Examples of verbs attesting lexicalized uses of -ɔ

Lexicalized derivate	Base verb
<i>baj</i> -ɔ ‘exist’ or ‘have time’	<i>baj</i> ‘have’
<i>jam</i> -ɔ ‘be famous’	<i>jam</i> ‘hear’
<i>bɔl</i> -ɔ ‘burn self’	<i>bɔl</i> ‘grill, roast’
<i>kɔk</i> -ɔ ‘be unlucky’	<i>kɔk</i> ‘tie s.th. up’
etc.	

4.4 Reflexive and non-reflexive uses of -ɔɔr

4.4.1 The reflexive and quasi-reflexive use of -ɔɔr

The reflexive use of -ɔɔr has been illustrated by (22), reproduced here as (40).

- (40) a. *Ijar fsmbanjaf* *man uguuy* *añulaw*.
 ijar fɔ-mbanj-a-f *man u-guuy* *a-ñul-a-w*
 take sg-blanket(F)-DEF-clF csc sl:2SG-cover sg-child(A)-DEF-clA
 ‘Take the blanket and cover the child (with it).’
- b. *Ijar fsmbanjaf* *man uguuyoɔr*.
 ijar fɔ-mbanj-a-f *man u-guuy-oɔr*
 take sg-blanket(F)-DEF-clF csc sl:2SG-cover-ɔɔR
 ‘Take the blanket and cover yourself (with it).’

However, -ɔɔr is used only marginally as a reflexive marker, and the possibility of marking subject-object coreference by means of -ɔɔr (rather than -ɔɔrɔ or -ɔ) can only be analyzed as a lexically specified property of a handful of verbs that do not constitute a natural semantic class. In all cases, the ɔɔr-verb can also express a reciprocal meaning. We also came across an equipollent pair in which the ɔɔr-verb has a reflexive meaning, and three pairs in which the use of -ɔɔr can be analyzed as quasi-reflexive (a type of meaning more commonly encoded by means of the suffix -ɔ – see §4.3.3). The list of the ɔɔr-verbs attested with a reflexive or quasi-reflexive meaning in our data is given in Table 12.

In the case of *sɔnten* ‘heal s.o.’, the addition of -ɔɔr gives a reflexive-causative meaning (*sɔnten*-ɔɔr ‘get treatment for self’, cf. French *se faire soigner*), whereas the plain reflexive meaning ‘heal self’ is regularly expressed as *sɔnten*-ɔɔrɔ. Our data include no other verb with the possibility of a similar contrast between -ɔɔr and -ɔɔrɔ.

Table 12: Reflexive or quasi-reflexive *ɔɔr*-verbs

Reflexive or quasi-reflexive <i>ɔɔr</i> -verb	Corresponding non-reflexive-verb
<i>guuy-ɔɔr</i> ‘cover self’	<i>guuy</i> ‘cover s.o. or s.th.’
<i>kɔf-ɔɔr</i> ‘scratch self’	<i>kɔf</i> ‘scratch s.o.’
<i>kɔɔren-ɔɔr</i> ‘heal self with inhalation’	<i>kɔɔren</i> ‘smoke an enclosed place’
<i>naan-ɔɔr</i> ‘smear one’s body’	<i>naan-en</i> ‘smear’
<i>bɔɔñ-ɔɔr</i> ‘curl up’	<i>bɔɔñ</i> ‘roll up, fold up’
<i>raaw-ɔɔr</i> ‘stretch self (arms, legs, etc.)’	<i>raaw</i> ‘stretch’
<i>tiiw-ɔɔr</i> ‘turn self over, turn self around’	<i>tiiw</i> ‘turn s.th. over, turn s.th. around’

4.4.2 Other uses of *-ɔɔr*

As illustrated in (41), *-ɔɔr* is fully productive as a reciprocal marker.

- (41) a. *Nan asaafolim, naanolī:* “*Miyoo*
 n-an a-saaf-oli-m n-aan-oli miyvv
 cLN-REL sI:cLA-greet-I:1PL.EXCL-ACT₁ PPF-sI:cLA.say-I:1PL.EXCL 2PL.PRO
bey ju:jε bεet?”
 b-ey ju-ja-ε bεet
 cLB-which sI:cLJ-go-ACT₀ ALL
 ‘After greeting us, he asked us: “Where are you going?”’
- b. *Nan ɔsaafoorɔm, naanɔm:*
 n-an ɔ-saaf-ɔɔr-ɔ-m n-aan-ɔm
 cLN-REL sI:1PL-greet-ɔɔR-EP-ACT₁ PPF-sI:cLA.say-I:1SG
Kareesi bvv?”
 ka-rees-i bvv
 SG-name(K)-I:2SG how
 ‘After we greeted each other, he asked me: “What’s your name?”’

The form *-ɔɔr* is also productively used with intransitive verbs to express joint action (as in *jaw-ɔɔr* ‘go together’ < *jaw* ‘go’, or *cin-ɔɔr* ‘live together as neighbors’ < *cin* ‘live at a place’).

Finally, the suffix *-ɔɔr* distinguishes itself by the very high proportion of lexicalized verb pairs in which a verb which seems to have been derived via the addition of *-ɔɔr* expresses a meaning whose relationship to that of the base verb is more or less opaque in the present state of the language (see Table 13).

Table 13: Examples of verbs attesting lexicalized uses of *-ɔɔr*

Lexicalized derivate	Base verb
<i>baj-ɔɔr</i> ‘be in conflict’	<i>baj</i> ‘have’
<i>gam-ɔɔr</i> ‘lament’	<i>gam</i> ‘advise’
<i>gɔr-ɔɔr</i> ‘move (intr.)’	<i>gɔr</i> ‘touch’
<i>kaan-ɔɔr</i> ‘quarrel’	<i>kaan</i> ‘do, make’
etc.	

4.5 Summary

Table 14 summarizes the possible uses of the three verbal suffixes of Jóola Fóoñi variously involved in the coding of reflexivization:

Table 14: The possible uses of *-ɔɔrɔ*, *-ɔɔr* and *-ɔɔr*

	<i>-ɔɔrɔ</i>	<i>-ɔɔr</i>	<i>-ɔɔr</i>
reflexive (other than body care)	+	(+)	(+)
reflexive (body care)	–	+	–
quasi-reflexive	–	+	(+)
decausative	–	+	–
passive, resultative	–	(+)	–
reciprocal	–	–	+
joint action	–	–	+
self-intensification	+	–	–

5 Reflexivization and self-intensification

As already discussed above, Jóola Fóoñi has the cross-linguistically exceptional particularity of marking self-intensification of the subject by means of a verbal suffix also acting as a reflexive voice marker.

Jóola Fóoñi also has free forms available to express self-intensification of NPs irrespective of their syntactic role, but our data include no example in which one of these self-intensifiers, either alone or combined with a pronoun, could be analyzed as acting as a reflexive pronoun.

5.1 The adnominal self-intensifier *fany*

Jóola Fooñi has a noun *f-ay* (gender F/K), glossed ‘personnalité, le moi/personality, the self’ in Sapir et al.’s (1993) Jóola-French-English dictionary, which is the obvious source of the adnominal self-intensifier *fanj* illustrated in (42). Note that *fanj* as an adnominal self-intensifier is optionally suffixed by an index resuming the noun or pronoun it intensifies.¹⁶

Interestingly, in (42c), in spite of the fact that the subject index of class U is homonymous with the subject index of 2nd person singular, a reflexive interpre-

¹⁶The optional suffixation of indexes is also found with other adnominal particles such as *ceb* ‘only’ or *buroom* ‘all’.

tation of *jakv̥m vgaalen awfanj* (that is, ‘don’t disturb yourself’) is excluded, since if it were the case, the verb form should include the suffix -ɔɔrɔ.

5.2 The noun *fu-ko* ‘head’ in self-intensifier function

In Jóola Fóoñi, the noun *fu-ko* ‘head’ has a grammaticalized use as an adnominal self-intensifier. In this use, *fu-ko* obligatorily combines with an index resuming the noun or pronoun it intensifies, and may optionally be introduced by the comitative-instrumental-locative preposition *di*.

Among Atlantic languages, it is common that the noun ‘head’ combined with a possessive index or pronoun acts not only as a self-intensifier, as in (43a),¹⁷ but also as a reflexive pronoun, as in (43b).

(43) Wolof (Atlantic)

- a. *Waxal ko sa bopp!*
wax-al ko sa bopp
say-IMP I:3SG POSS.2SG head(B)
‘Say it yourself’
- b. *Wuude bi du ëwal*
wuude b-i du ëw-al
shoemaker(B) clB-DEF.PROX NEG.SI:3SG sew.leather-APPL
boppam.
bopp-am
head(B)-I:3SG
‘The shoemaker does not sew leather for himself’

The case of Jóola Fooñi is very different, since ‘*fu-ko* ‘head’ + possessive index or pronoun’ in its grammaticalized use can only occur as an emphatic self-intensifier, never as a reflexive pronoun. In all the examples we have in our data, ‘*fu-ko* ‘head’ + possessive index or pronoun’ combines with a verb form marked by the suffix -ɔɔrɔ in self-intensifying function, and just adds some additional emphasis, as in (44b).

- (44) a. *Jaw usiiloro!*
jaw u-siil-ooro
go SI:2SG-cook-ɔɔRɔ
‘Go and do the cooking for yourself!’ (autobenefaction)
or ‘Go and do the cooking yourself!’ (self-intensification)

¹⁷The two sentences quoted in (43) are from Diouf’s (2003) Wolof-French dictionary.

- b. *Jaw usiiloro fukoi!*
jaw u-siil-ooro fu-ko-i
go sl:2SG-cook-ɔɔRɔ SG-head(F)-I:2SG
'Go and do the cooking YOURSELF!' (emphatic self-intensification)
- c. * *Jaw usiil fukoi!*
jaw u-siil fu-ko-i
go sl:2SG-cook-ɔɔRɔ SG-head(F)-I:2SG

6 Conclusions

In this article, basing ourselves on a corpus of naturalistic texts of various genres completed by elicitation because of the relative scarcity of reflexive constructions in the corpus, we have analyzed the way Jóola Fóoñi codes coreference within the clause, as well as the non-reflexive uses of the verbal suffixes that have the ability of acting as reflexive voice markers. The main conclusions are as follows:

- Jóola Fóoñi does not have reflexive pronouns or indexes.
- Subject-object coreference requires verbal marking by means of derivational suffixes that reduce by one the number of objects compatible with the verb and imply that a single participant, encoded as the subject, cumulates the semantic roles assigned to the subject and (one of) the object(s) in the construction of the base verb.
- Due to the extensive use of multiple-object constructions, and to the fact that beneficiaries are simply coded as objects, in Jóola Fóoñi, agent-goal coreference and agent-beneficiary coreference are just particular cases of subject-object coreference.
- Coreference relationships within the clause other than subject-object coreference are not treated differently from coreference in discourse.
- Three verbal suffixes may be found in constructions in which they act as reflexive voice markers, but all three also have non-reflexive uses: -ɔɔr, whose use in reflexive constructions is marginal, is productively used as a reciprocal voice marker; -ɔ, used as a reflexive voice marker with body-care verbs, is also productive in quasi-reflexive (or auto-causative) and decausative function; -ɔɔRɔ, analyzable as the default reflexive voice marker, is also fully productive as a marker of self-intensification of the subject.

- Jóola Fóoñi shows that the co-expression of self-intensification and reflexivization, very common cross-linguistically for free self-forms, may also characterize verbal derivational suffixes.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ACT	actualizer	OBLG	obligative
clX	class X	PPF	pre-prefix
CSC	consecutive	PREP	preposition
EP	epenthetic vowel	PRO	pronoun
HYP	hypothetical	RDPL	reduplicative suffix
I	index (other than subject index cf. sI)	REL	relativizer
ICOMPL	incompletive	SEQ	sequential
LCOP	locational copula	sI	subject index
		VEN	ventive

Capital letters between parentheses immediately after the lexical gloss of nouns (for example, ‘woman(A)’, or ‘dog(E)’) or after the gloss INF (‘infinitive’) indicate the agreement pattern associated to the form in question.

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Chapter 6

Reflexive constructions in Kambaata

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Kambaata (Cushitic, Ethiopia) has a nominal and a verbal reflexivizer. The nominal reflexivizer *gag-á* ‘self’, a case-inflecting noun of masculine gender, is used to mark coreference between the subject and a direct, indirect or oblique object. Whereas the antecedent of the reflexive noun is most commonly the subject of the same clause, this chapter argues that *gag-á* ‘self’ also qualifies as a long-distance reflexive. As such, it can mark coreference between an NP in an infinite or finite subordinate clause and the subject of the matrix clause. Apart from being used in reflexive constructions, *gag-á* ‘self’ is a self-intensifier. The middle morpheme *-aqq/-'* on verbs is multifunctional. Most productively, it expresses autobenefactivity. It can also mark coreference between the subject and the direct object in the same clause. However, in typical reflexive situations (e.g. ‘see oneself’), it is rarely the only reflexivizer but cooccurs with the reflexive noun *gag-á*.

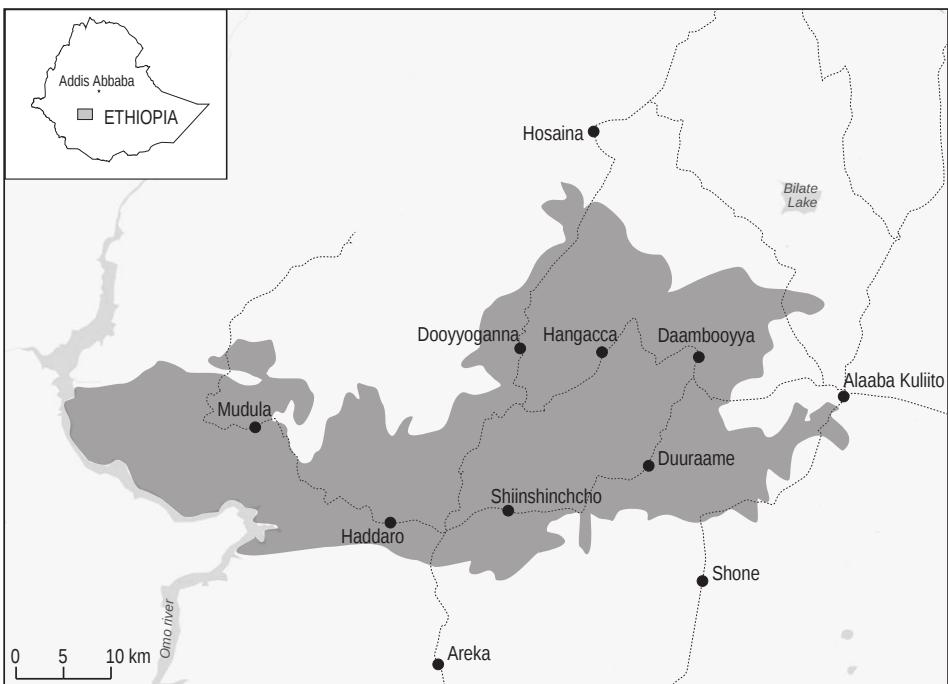
1 Introduction

Kambaata is a Highland East Cushitic (HEC) language spoken by more than 600,000 people (Central Statistical Agency 2007: 74) in the Kambaata-Xambaaro Zone in the Southern Region of Ethiopia (see Figure 1).¹

Immediate neighbors are speakers of other HEC languages (Hadiyya and Alaba) and Ometo languages of the Omotic family (Wolaitta and Dawro). The most widespread second language of Kambaata speakers is the Ethiopian lingua franca Amharic. The description of reflexive constructions presented here is based on data from diverse sources obtained during field research between 2002 and 2019:

¹Place names in the KX-zone are written in the official Kambaata orthography. All boundaries are unofficial.





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Figure 1: Map of the Kambaata-Xambaaro Zone

a corpus of recorded narratives and conversations, my field notes of elicited sentences and mock-dialogues as well as a corpus of written texts, including locally published collections of oral literature, schoolbooks, a dictionary, religious texts and the translation of the *Little Prince* (de Saint-Exupéry 2018). Gaps in the data were filled and open questions were discussed in interviews on the phone or through text and voice messages with a native speaker in 2020. The questionnaire by Janic & Haspelmath (2023 [this volume]) provided guidance for the data compilation and analysis.

1.1 Typological profile

The constituent order of Kambaata is consistently head-final, hence all modifiers precede the noun in the NP, and all dependent clauses precede independent main clauses. The last constituent in a sentence is usually a fully finite main verb or a copula. Kambaata is agglutinating-fusional and, except for one partial

pre-reduplication process,² strictly suffixing. Inflectional morphology is realized by segmental suffixes together with stress suprafixedes. The following open word classes are defined on morphosyntactic grounds: nouns, adjectives, verbs, ideophones and interjections.

Kambaata has a nominative-accusative case-marking system. The nominative is the subject case, see ‘girls’ in (1). The accusative marks direct objects – see ‘good place’ in (1) – and certain adverbial constituents, it also serves as the citation form of nouns and adjectives. Nouns distinguish nine case forms: nominative, accusative, genitive, dative, ablative, instrumental, locative, oblique and predicative. Nouns are marked for gender (masculine vs. feminine), the assignment of grammatical gender is mostly arbitrary. Attributive adjectives, such as ‘good’ in (1), agree with their head noun in case and gender.³

- (1) (...) *masal-aakk-atí-i danaam-ítá ma'nn-ítá aat-táa-s*
 girl-PLV2-F.NOM-ADD good-F.ACC place-F.ACC give-3F.IPFV-3M.OBJ
 (Speaking about the winner of a wrestling competition) ‘(...) and also the girls honor him (lit. give him a good place).’ [Conversation about circumcision traditions, EK2016-02-23_001]

Fully finite main verbs are distinguished from several types of dependent verbs, which are reduced in finiteness, i.e. relative verbs, converbs, purposive verbs and (infinite) verbal nouns. Verbs inflect for aspect, mood, polarity and syntactic dependence. All verb forms apart from verbal nouns obligatorily index their subject; see the portmanteau morpheme *-táa* in (1), which encodes imperfective aspect and indexes a 3rd person feminine subject. Object suffixes on verbs, such as the 3rd person masculine object suffix *-s* in (1) and the 1st person singular object suffix *-'e* in (2), are pronominal in nature and usually substitute for object nominals. A finite verb form alone can constitute a complete utterance (2).

- (2) *qéel-teente-'e*
 defeat-2SG.PRF-1SG.OBJ
 (Complete turn in a dialogue:) ‘You have defeated me.’ [Narrative, EK2016-02-12_003]

²See (28) for an example of a pre-reduplicated noun.

³Transcriptions in this chapter use the official Kambaata orthography, which is based on the Roman script (Treis 2008: 73–80; Alemu 2016). One important adaptation is here made to the official orthography: phonemic stress is marked by an acute accent on the vowel. The following graphemes are not in accordance with IPA conventions: ⟨ph⟩ /p'/, ⟨x⟩ /t'/, ⟨q⟩ /k'/, ⟨j⟩ /dʒ/, ⟨c⟩ /tʃ/, ⟨ch⟩ /tʃ/, ⟨sh⟩ /ʃ/, ⟨l⟩ /l/, ⟨r⟩ /r'/, ⟨y⟩ /j/ and ⟨ŋ⟩ /?/. Geminate consonants and long vowels are marked by doubling, e.g. ⟨shsh⟩ /ʃ:/ and ⟨ee⟩ /e:/. In clusters of a glottal stop and a sonorant, the sonorant is, by convention, written double, e.g. ⟨'nn⟩ for /?n/ and ⟨'rr⟩ /?r/. Nasalization is marked by a macron, e.g. ⟨ā⟩ /ā/.

1.2 A preview of reflexive constructions

Kambaata uses a reflexive noun *gag-á* ‘self’ plus a possessive suffix (3) or a reflexive voice marker *-aqq/-*, labelled “middle (derivation)” [MID] (4), to express coreference between the subject and an accusative object.

- (3) *Gag-á-s* *ba'-íshsh-o*
 self-M.ACC-3M.POSS be.destroyed-CAUS1-3M.PFV
 (Speaking about the actual cause of someone’s death whom the addressee thought to have died from an illness) ‘He killed himself (lit. his self).’
 [Elicited, DW2020-01-24]
- (4) *Kabár* *gagmoxx-iin xuud-aqq-aammi=da* *áda*
 today.M.OBL mirror-M.ICP see-MID-1SG.IPFV.REL=COND then
 móok-i- *sabáb-b* *darsh-ítee'u*
 cheek-F.NOM-1SG.POSS ensue-3F.PFV.CVB become.swollen-3F.PRF
 (Speaking about the consequences of a brawl) ‘Then when I saw myself in the mirror today, my cheek was badly swollen.’ [Elicited, DW2020-01-24]

In (5), both reflexivizers cooccur in the same clause. The verb *saaxx-* ‘praise oneself’ is the middle derivation of *saad-* ‘praise (someone)’.

- (5) *Isú* *mánn-u* *galaxx-u'nnáachchi-s*
 3M.ACC people-M.NOM thank-3M.NEG4-3M.OBJ
 birs-í-ni-n *ís* *gag-á-s*
 do.before-3M.PFV.CVB-EMP-EMP 3M.NOM self-M.ACC-3M.POSS
 saaxx-án *biir-óochch biir-úta* *zahh-áyyoo'u*
 praise.MID-3M.IPFV.CVB office-F.ABL office-F.ACC walk-3M.PROG
 ‘Before people (could) thank him (for the job), he walked from office to office praising himself.’ [Elicited, DW2020-01-24]

In the following sections, I will first introduce the personal pronoun system of Kambaata (§2) and then discuss the form and functions of the noun *gag-á* ‘self’ (§3). Apart from being used as a reflexivizer in various syntactic functions (except in the subject function), it is used as a self-intensifier. In §4, I present the multifunctional middle derivation, whose most productive function is to signal coreference between the subject and a beneficiary (a dative adjunct). It also marks coreference between the subject and a direct (accusative) object, but here it usually cooccurs with the reflexive noun. Thirdly, the middle derivation has an intersubjective use and expresses the emotional involvement of the subject

in a state-of-affairs. Together with the passive morpheme, the middle derivation marks reciprocity. In the conclusion (§5), I lay out the contexts in which the reflexive noun is preferred over the middle morpheme and when double expression is preferred over the use of only one reflexive marker.

2 Personal pronouns

Kambaata has free (§2.1) and bound personal pronouns (§2.2), but no pronoun-like reflexive nominals (i.e. pronominoids). Personal pronouns are used to refer to humans, less often to other animates, and usually not to inanimate referents like things or events, for which demonstratives are preferred.

2.1 Free personal pronouns

Free personal pronouns (Table 1) distinguish person, number, gender (in the 3rd person), honorificity (in the 2nd and 3rd person) and case. The case paradigm of personal pronouns is partly suppletive; see, for instance, the different stems that are used for the nominative and accusative forms of 1SG, 2SG, 2HON, 1PL, and 2PL. In principle, personal pronouns distinguish as many case forms as nouns. However, there is systematic syncretism of the instrumental-comitative-perrelative [ICP] and locative [LOC] forms for all persons except 3M. Furthermore, the oblique and the predicative case forms are only minimally distinct in the 1st person plural. The singular predicative forms combine with the copula [COP3]-Vt. In the plural, the copula [F.COP2] '-taa is required (see Treis 2008: 397–426 for information on the distribution of Kambaata copulas).

2.2 Bound personal pronouns

Bound object pronouns on verbs and bound possessive pronouns on nouns and adjectives (Table 2) are only minimally distinct: for 1SG possessors and 2SG objects, speakers can choose between two freely distributed allomorphs, whereas only one of the allomorphs is admitted for the respective 1SG object and the 2SG possessor form. A comparison with free pronouns (§2.1) shows that bound pronouns neutralize the distinction between honorific and plural referents in the 2nd and 3rd person. The right column of Table 2 exemplifies the use of possessive suffixes on the accusative form of the reflexive noun *gag-á* ‘self’.

Possessive pronouns never cooccur with full nominal possessors. Object pronouns typically substitute for direct or indirect object nominals; recall (1). However, in case of high referential prominence, an object can be doubly expressed by

a full object nominal – a noun or pronoun phrase – and a bound object pronoun on the verb, as seen in (6) and later in (14).

- (6) *Harr-ée buud-á kesáa m-á buchch-iichch*
 donkeys-F.GEN horn-M.ACC 2SG.DAT what-M.ACC soil-M.ABL
eeb-o<kké>ta-at?
 bring-1SG.PURP.SS<2SG.OBJ>-COP3
 ‘From where on earth am I going to bring you a donkey horn?’
 [Narrative, EK2016-02-12_003]

Table 1: Free personal pronouns

	NOM	ACC	GEN	DAT	ABL
1SG	án	ées	íi	esáa(ha)	esáachch
2SG	át	kées	kíi	kesáa(ha)	kesáachch
2HON	á’nnu	ki’nnéta	ki’nné	ki’nnée(ha)	ki’nnéechch
3M	ís	isú	isí	isíi(ha)	isíichch
3F	íse	iséta	isé	isé(ha)	iséechch
3HON	íssa	issáta	issá	issáa(ha)	issáachch
1PL	na’oot	nées	níi	nesáa(ha)	nesáachch
2PL	a’nno’oot	ki’nne’éeta	ki’nne’ée	ki’nne’ée(ha)	ki’nne’éechch
3PL	isso’oot	isso’óota	isso’óo	isso’óo(ha)	isso’óochch
	ICP	LOC	OBL	PRED	
1SG	esáan	esáan	áne	áne	
2SG	kesáan	kesáan	áte	áte	
2HON	ki’nnéen	ki’nnéen	á’nno	á’nno	
3M	isíin	isóon	íso	íso	
3F	iséen	iséen	íse	íse	
3HON	issáan	issáan	íssa	íssa	
1PL	nesáan	nesáan	na’ó	na’óo	
2PL	ki’nné’een	ki’nné’een	a’nno’óo	a’nno’óo	
3PL	isso’ón	isso’ón	isso’óo	isso’óo	

Table 2: Bound personal pronouns and the reflexive noun

	Pronominal suffixes	Reflexive noun [ACC] with possessive suffix
1SG.OBJ	-'e	–
1SG.POSS	-'e ~ -'	<i>gag-á-'e</i> ~ <i>gag-á-</i> '
2SG.OBJ	-(k)ke ~ -he	–
2SG.POSS	-(k)k	<i>gag-á-kk</i>
3M	-s	<i>gag-á-s</i>
3F	-se	<i>gag-á-se</i>
1PL	-(n)ne	<i>gag-á-nne</i>
2PL (=2HON)	-(k)ki'nne ~ -'nne	<i>gag-á-kti'nne</i> ~ <i>gag-á-'nne</i>
3PL (=3HON)	-(s)sa	<i>gag-á-ssa</i>

3 Reflexive noun

3.1 Form and meaning

Kambaata uses the reflexive noun *gag-á* ‘self’, usually combined with a possessive suffix (Table 2),⁴ to express coreference between the subject and another participant in the clause. *Gag-á* ‘self’ is clearly noun-like in nature. It inflects for case (Table 3)⁵ like any regular common noun of the masculine declension M1 (Treis 2008: 103). In the text of this chapter, the reflexive noun is always cited in its accusative form *gag-á*.

Table 3: The case paradigm of *gag-á* ‘self’

ACC	<i>gag-á</i>	ABL	<i>gag-úichch</i>
NOM	<i>gág-u</i>	ICP	<i>gag-íin</i>
GEN	<i>gag-i_-'</i>	LOC	<i>gag-áan</i>
DAT	<i>gag-ii(ha)</i>	OBL=PRED	<i>gág-a</i>

⁴There are two instances in the Gospel of John in which the possessor of *gag-á* ‘self’ is expressed by a free genitive pronoun, e.g. *ii* [1SG.GEN], *gag-ii* [self-M.DAT] ‘for myself’. For the use of unmodified reflexive nouns, see §3.2.5.

⁵In Table 3, the notation *-i_-'* of the genitive morpheme indicates that the case is realized by a segment *-i* and a stress suprafix on the rightmost syllable of the word.

Gag-á ‘self’ is a transnumeral noun and thus allows for singular and plural reference. It is not attested with plurative [PLV] marking, but a singulative [SGV] example is presented in (13). The reflexive noun is marked for distributivity through partial pre-reduplication (‘each ... oneself’), as seen in (28). Other morphemes that can attach to the reflexive noun are the emphasis marker *-n* (13), the additive marker *-V* (21), and – when ‘self’ is the head or modifier of the non-verbal predicate (33) – the copula. The stem of the reflexive noun can be the input of the status noun derivation with *-oom-áta* (Treis 2008: 171): *gag-oom-áta* ‘identity (lit. selfhood, selfness)’ (Alemu 2016: 349), as shown in (7).⁶

(7) *Gag-oom-á-nne*

self-STAT-F.ACC-1PL.POSS

caakk-is-soonti-nné=g-a< n>ka

become.light-CAUS1-2SG.PFV-1PL.OBJ.REL=SIM-M.ACC<EMP>

bír-i-kk *caakk-ítu*

future-F.NOM-2SG.POSS become.light-3F.BDV

‘As you brought our identity to light, may your future be bright!’ (Adane No date: 4)

The noun *gag-á* ‘self’ can be used metaphorically to express a ‘person like oneself’, or a ‘close relative’, as illustrated in (8).

(8) *Gág-u buud-á woqqarr-ó=da allagg-íchch-u*

self-M.NOM horn-M.ACC strike-3M.PFV.REL=COND strangers-SGV-M.NOM

ill-ítu qas-áno

eye-F.ACC poke-3M.IPFV

‘If a next of kin (lit. a self) strikes the horn (of your bull), a stranger (can) poke (you in your) eye.’ (Proverb, Alamu Banta Ataara & Alamaayyo G/Tsiyoon 2017: 52)

While ‘head’ is the most common source for reflexive nominals in the languages of the world (Schladt 2000) – see also the reflexivizer *ras* ‘head’ in Amharic (Leslau 1995: 57–58), the primary contact language of Kambaata, and the reflexivizer *umo* ‘head’ in the closely related HEC language Sidaama (Kawachi 2007: 184–187), – there is no indication that Kambaata *gag-á* goes back to a noun ‘head’. A reflexive noun cognate to that of Kambaata is used in the HEC languages Alaaba, K’abeena and Hadiyya (Crass 2005: 257–259; Schneider-Blum 2007: 188–199; Tadesse 2015: 90–91).

⁶All examples taken from publications in the Kambaata language are stress-marked, segmented, glossed and translated to English by the present author.

3.2 Reflexive constructions

3.2.1 Autopathic domain

Coreference between the subject and its direct object in a monotransitive clause is expressed by an accusative-marked reflexive noun. The possessive suffixes on *gag-á* ‘self’ are coreferential with the subject of the clause, e.g. 3M in (3), 1SG in (9) and (13), 2PL in (10) and 3PL in (11). The examples (9–11) illustrate that the subject is not necessarily expressed by an independent nominative NP, it suffices to have it indexed on the verb. As the seven subject indexes and the seven possessive suffixes are not fully congruent, a mismatch is observed in (11). The ordered persons are indexed as 3F [=3PL] on the verb *torr-* ‘throw’ but as 3PL [=3HON] on ‘self’.⁷

- (9) (...) *gag-á-* *isso'oo-sí* *qax-á< n>ka* *ass-í*
 self-M.ACC-1SG.POSS 3PL.GEN-DEF level-M.ACC<EMP> do-1SG.PFV.CVB
 kot-íshsh=ké (...)
 become.small-CAUS1.1SG.PFV.CVB=SEQ
 ‘(...) I lower myself to their level (...)’ (de Saint-Exupéry 2018: 11)
- (10) *Gag-á- nne* *xa'mm-iyyé: áā-ndo áā-bay?*
 self-M.ACC-2PL.POSS ask-2PL.IMP yes-Q yes-NEG1.Q
 ‘Ask yourselves: Yes or no (lit. not yes)?’ (de Saint-Exupéry 2018: 93)
- (11) *Át* *gashsh-itaanti* *mann-á*
 2SG.NOM pass.the.night.CAUS1-2SG.IPFV.REL people-M.ACC
 gag-á-ssa *már-t* *baar-í* *aaz-éen*
 self-M.ACC-3PL.POSS go-3F.PFV.CVB sea-M.GEN inside-M.LOC
 torr-ítunta *azzaz-zoonti-ssá=da* (...)
 throw-3F.PURP.DS order-2SG.PFV-3PL.OBJ.REL=COND
 ‘If you ordered the people you govern (lit. make pass the night) to go and throw themselves into the sea (...)’ (de Saint-Exupéry 2018: 38)

In (12), the subject that serves as the antecedent of the reflexive noun is expressed by a possessive pronoun (-ssa [3PL.POSS]) on the infinite verbal noun.⁸

⁷Free personal pronouns distinguish nine forms (Table 1), possessive/object pronouns (Table 2) and subject indexes only seven. In the possessive/object paradigm, we see the following syncretism: 1SG, 2SG, 3M, 3F, 1PL, 2PL [=2HON], 3PL [=3HON]. Another type of syncretism is found in the subject index paradigm: 1SG, 2SG, 3M, 3F [=3PL], 3HON, 1PL, 2PL [=2HON].

⁸Unlike other verb forms, verbal nouns cannot index their subjects. The subject is either expressed by a nominative NP, a genitive NP or a possessive pronoun.

- (12) (...) *gag-á-ssa-n* *íkko ées* *haww-íichch*
 self-M.ACC-3PL.POSS-EMP or 1SG.ACC trouble-M.ABL
fa'-is-ú-ssa *dag-áam-ba'*
 be.saved-CAUS1-M.ACC-3PL.POSS know-1SG.IPFV-NEG1
 '(...) I don't know whether they can save themselves and me (lit. I don't
 know their saving themselves or me) from trouble.' (Kambaata Education
 Bureau 1989: 3.118)

The transnumeral reflexive noun can indicate coreference with singular and plural subjects, see *gag-á* in (9) and (10–12), respectively. However, we still find a small number of overtly singulative-marked forms in the corpus (13). The pragmatic reason for this marking is still unknown.⁹ In contrast, overt plurative marking (hypothetically **gag-g-áta* [PLV1] or **gag-aakk-áta* [PLV2] 'selves') is unattested and was rejected by the native speaker I consulted.

- (13) *Gag-ichch-ú-'e-n* *ikk-oommí=da* *esáa*
 self-SGV-M.ACC-1SG.POSS-EMP become-1SG.PFV.REL=COND 1SG.DAT
woyy-áno-'e
 become.better-3M.IPFV-1SG.OBJ
 (Protagonist of a story who has adopted body parts of other animals:) 'It
 would be better if I became myself (again).' [Narrative, TD2016-02-11_001]

A non-reflexive free accusative pronoun or a non-reflexive object suffix on the verb is necessarily interpreted as being referentially disjoint with the subject. See, for instance, the clause marked in bold in (14): the free accusative pronoun *isú* 'him' and the object suffix -*sí* (here infixated into the purposive verb) are always interpreted as being referentially disjoint from the subject of 'help' (reflected in the subject index 3M). The same is true of the object suffix -*s* on the main verb 'ask'; neither in this nor in any other context can it be coreferential with the subject 'little prince'.

- (14) “(...)” *y-i=ké'* *xa'mm-ée-s* *qakkíchch-u láah-u,*
 say-3M.PFV.CVB=SEQ ask-3M.PFV-3M.OBJ little-M.NOM prince-M.NOM
isú kaa'll-o<si>ta *hashsh-o-sí=biiha*
 3M.ACC help-3M.PURP.SS<3M.OBJ> want-3M.PFV-3M.OBJ.REL=REAS2
 “(...)” said the little prince to him (*himself), because he wanted to help
 him (*himself).’ (de Saint-Exupéry 2018: 44)

⁹Note that one of the functions of singulative marking on transnumeral nouns is to express endearment (Treis 2014: 118f).

3.2.2 Oblique domain

Kambaata also makes use of the reflexive noun *gag-á* ‘self’ to signal coreference between the subject of a clause and its indirect or oblique objects. In (15), the dative-marked beneficiary is coreferential with the subject ‘doves’. In (16), the ablative-marked source is coreferential with the 2SG subject. In (17), the locative-marked indirect object is coreferential with the 3F [=3PL] subject of its clause.

- (15) *Wól-i-s handar-ití-i (...) gag-íiha-n-sa*
other-F.NOM-DEF doves-F.NOM-ADD self-M.DAT-L-3PL.POSS
it-táa=r-a bajig-ónon hacc-itáyyoo'u
eat-3F.IPFV.REL=NMLZ4-M.ACC happiness-F.ICP look.for.MID-3F.PROG
‘And the other doves (...) were happily looking for food (lit. what they eat) for themselves.’ (Kambaata Education Bureau 1989: 8.19)
- (16) *Át káan y-itaantí-i*
2SG.NOM P_DEM1.M.ACC say-2SG.IPFV.REL-NMLZ1.M.NOM
gag-íichchi-kke-eti-ndo (...)?
self-M.ABL-2SG.POSS-COP3-DISJ
(John 13:32) ‘Is this your own idea (lit. is it from yourself that you say this or (...)?’ (Kambaata and Hadiyya Translation Project Hosaina 2005: 83)
- (17) *Gag-áan-ta-ssa dikka'-áa-na wol-ú mann-á*
self-M.LOC-L-3PL.POSS rely-3F.IPFV.REL-CRD other-M.ACC people-M.ACC
gad-dán “Ná'oot xumm-áan-n-u-a”
despise-3F.IPFV.CVB 1PL.NOM peace-AG-PLV3-M.PRED-M.COP2
y-itáa mann-íi (...) kúll-o-ssa
say-3F.IPFV.REL people-M.DAT tell-3M.PFV-3PL.OBJ
‘(He) said (...) to the people who trusted in themselves, who despised others and who said, “We are righteous”.’ (The Bible Society of Ethiopia No date: 16)

The reflexive noun is also attested in morphologically complex oblique object NPs, e.g. those that are headed by a case-marked relational noun, such as *al-éen* ‘on top’ (18), or a case-marked nominalizer (19). Relational nouns and nominalizers govern genitive-marked modifiers.

- (18) *Gag-i-kkí al-éen gar-é murat-úta*
 self-M.GEN-2SG.POSS top-M.LOC justice-F.GEN judgement-F.ACC
aass-itaantí manch-ú ik-koontí=da (...)
 give-2SG.IPFV.REL person.SGV-M.ACC become-2SG.PFV.REL=COND
 ‘If you are a person who (can) pass a fair judgment on yourself (lit. on top of your self) (...).’ (de Saint-Exupéry 2018: 40)
- (19) *Ku máñch-u gag-i-sí=tann-ée*
 A_DEM1.M.NOM person.SGV-M.NOM self-M.GEN-3M.POSS=NMLZ3-F.DAT
xall-ii sáww=y-u’nnáan (...)
 only-M.DAT think=say-3M.NEG4
 ‘This man does not only think about himself (lit. for the one of his self) (...).’ (de Saint-Exupéry 2018: 52)

Kambaata does not have any adpositions but uses case markers or case-marked relational nouns to mark circumstantial adjuncts, e.g. locative adjuncts. Circumstantial adjuncts usually do not contain a reflexive noun in case of coreference with the subject. The phrase *shiin-áan-ta-se* ‘beside her, at her side’ in (20) is ambiguous and can be interpreted as ‘at her own side’ or ‘at her (= another feminine referent’s) side’. (See also §3.2.4 on the reflexive possessor.)

- (20) *Worr-iichch-ú mexx-é-ni-n shiin-áan-ta-se*
 snakes-SGV-M.ACC single-MULT-EMP-EMP side-M.LOC-L-3F.POSS
xíud-d (...)
 see-3F.PFV.CVB
 ‘She suddenly saw a snake beside her(self) (lit. at her side) (...).’ [Elicited, DW2020-01-24]

3.2.3 Long-distance domain

In Kambaata, the antecedent of the reflexive noun does not have to be an argument of the same minimal clause. Even though my database does not provide a large number of examples, there is sufficient proof that *gag-á* ‘self’ qualifies as a long-distance reflexive, i.e. a reflexive noun that “can occur in a subordinate clause and take its antecedent in the matrix clause” (Haspelmath 2023 [this volume]). In some diagnostic examples, the reflexive noun is found in an infinite verbal noun clause [vnc] and its antecedent in the matrix clause. In (21), the antecedent of ‘self’ is the subject of the matrix clause – see the 1SG index on the main verb. In (22), the antecedent is the indirect object, expressed as a 2SG object pronoun, of the main verb.

- (21) [*Gag-a-’í-i*, *min-i-nné-e*,
 self-M.ACC-1SG.POSS-ADD house-M.ACC-1PL.POSS-ADD
hegeeg-u-’í-i *muccur-ú ass-íi*]_{VNC} *abb-á*
 area-M.ACC-1SG.POSS-ADD clean-M.ACC make-M.DAT big-M.ACC
yakitt-á ass-áamm
 effort-M.ACC make-1SG.IPFV
 ‘I will make a great effort to clean myself, our house and my environs.’
 (Kambaata Education Bureau 1989: 4.120)

- (22) [(...) *gag-á-kk* *mann-íi* *hor-íi< n>ka*
 self-M.ACC-2SG.POSS people-M.DAT all-M.DAT<EMP>
lall-íis-u]_{VNC} *hasis-áno-he*
 appear-CAUS1-M.NOM be.necessary-3M.IPFV-2SG.OBJ
 (John 7:4) ‘(...) you need to show yourself to everybody (lit. to show
 yourself to everybody is necessary for you).’ (Kambaata and Hadiyya
 Translation Project Hosaina 2005: 32)

Examples (21–22) do not seem surprising from the perspective of European languages where reflexive pronouns can be employed in the non-finite long-distance domain (cf. Haspelmath 2023: §9 [this volume]). However, Kambaata goes a step further. As (23) illustrates, an antecedent can just as well be coreferential with a reflexive noun in a finite subordinate clause. The ablative-marked standard of comparison *gag-íichchi-s* ‘from/than himself’ – found in a relative clause inside another relative clause that modifies the subject of the main clause – is coreferential with the 3M subject of the hierarchically superior matrix clause, i.e. the subject indexed on *he'-anó* ‘(who) lives’.

- (23) [*Mát-o dooll-áan* [[*haraarím-a-s* *mát-o*
 one-M.OBL time-M.LOC width-F.NOM-3M.POSS one-M.OBL
gag-íichchi-s kank-á< n>ka *abb-itúmb-o*]_{RC}
 self-M.ABL-3M.POSS that.much-M.ACC<EMP> become.big-3F.NEG5-M.OBL
plaaneet-í al-éen he'-anó]_{RC}-na [*jaal-á*
 planet-M.GEN top-M.LOC live-3M.IPFV.REL-CRD friend-M.ACC
has-áyyoo]_{RC} *qakkíchch-u láah-u* *yóo' ikke*]_{Main c}
 look.for.MID-3M.PROG little-M.NOM prince-M.NOM COP1.3 PST
 ‘Once upon a time there was a little prince who lived on a planet the
 width of which was not much bigger than (the little prince) himself and
 who was looking for a friend.’ (de Saint-Exupéry 2018: 20)

3.2.4 Adposessive domain

The adnominal possessor of a non-subject participant can be coreferential or non-coreferential with the subject. Kambaata does not make a distinction between subject-coreferential and subject-disjoint free possessor (genitive) pronouns or possessive suffixes. In (24), the suffix *-s* [3M.POSS] on an instrumental-comitative-perative participant is coreferential with the subject ‘Father God’, whereas the subject ‘he’ (as indexed on the verb) and the possessor are disjoint in (25).

- (24) *Ánn-u Magán-u beet-iin-ta-s ább-unta (...)*
 father-M.NOM God-M.NOM son-M.ICP-L-3M.POSS be.glorified-3M.PURP.DS
 (John 14:13) (Literal translation of the Kambaata version:) ‘So that Father
 God is glorified through his (own) son (...).’ (Kambaata and Hadiyya
 Translation Project Hosaina 2005: 68)
- (25) A: *Manch-í_i min-í márr-o_j-ndo? - B: Márr-ee_j ikke,*
 person.SGV-M.GEN house-M.ACC go-3M.PFV-Q go-3M.PRF PST
 mánch-u-s_i yóo-ba'a, beet-iin-ta-s_i
 person.SGV-M.NOM-DEF COP1.3-NEG1 son-M.ICP-L-3M.POSS
 daqq-ámm-ee'u;
 meet.MID-PASS-3M.PRF
 A: ‘Did he_j go to the man’s_i house?’ – B: ‘He_j went there, (but) the man_i
 was not there, he_j met his_i (= the man’s) son.’ [Elicited, DW2020-02-22]

Explicit coreference between the subject and the possessor of a non-subject participant in the same clause is expressed with a genitive-marked reflexive noun plus a possessive suffix, see ‘the mother’ and ‘her (own) part’ in (26), ‘these’ and ‘their (own) language’ in (27), and ‘they’ and the distributive phrase ‘(each) their (own) people’ in (28).

- (26) (...) *am-atí-i gag-i-sé wud-iin qixxan-táa'u*
 mother-F.NOM-ADD self-M.GEN-3F.POSS side-M.ICP get.ready-3F.IPFV
 ‘(...) and the mother gets ready for her (own) part.’ [Conversation about
 circumcision traditions, EK2016-02-23_001]
- (27) “*Kúru gag-i-ssá afóo haasaaww-ú*
 P_DEM1.PL.M.NOM self-M.GEN-3PL.POSS mouth-M.ACC speak-M.NOM
 iitt-ít bá'-ee-haa=rr-a”
 love-3F.PFV.CVB do.very.much-3F.PRF.REL-M.COP2=NMLZ4-M.PRED

y-isiiicc-iyyé!
say-CAUS2.MID-2PL.IMP

‘Make them say to themselves: “These are (people) who love to speak their (own) language (lit. mouth) very much.”’ [Symposium speech, DW2016-09-24]

- (28) *Gág-gag-i-ssá* *mann-á< n>ka*
 RED-self-M.GEN-3PL.POSS people-M.ACC<EMP>
aag-is-sáa-haa
 enter-CAUS1-3F.IPFV.REL-M.COP2
 ‘They intermarry in their own kin-group (lit. they marry each their own people).’ [Elicited, DW2004-11-03]

However, the genitive-marked reflexive noun is not strictly subject-oriented. It may also signal coreference between a possessor and a non-subject participant in the same clause. In my database, one finds, among others, examples in which the antecedent is the dative NP in a predicative possessive construction with *yoo-* ‘exist’ [COP1], see ‘for the ones who hunt’ in (29), or an accusative object, see ‘the flower’ in (30).

- (29) (...) *ées* *hugaax-xaa=r-iihá-a_i* *gag-i-ssá_i*
 1SG.ACC hunt-3F.IPFV.REL=NMLZ4-M.DAT-ADD self-M.GEN-3PL.POSS
séer-u *yoo-haa*
 rule-M.NOM COP1.3.REL-M.COP2
 ‘(...) and the ones who hunt me have their own rules (lit. and for the ones_i who hunt me, there are their_i own rules).’ (de Saint-Exupéry 2018: 70)
- (30) (...) *qakkíchch-u láah-u* *fít-ichch-úta_i* *ankar-í*
 little-M.NOM prince-M.NOM flower-SGV-F.ACC night-M.ACC
ankar-í *gag-i-sé_i* *burcuq-óoni-n* *iffíshsh (...)*
 night-M.ACC self-M.GEN-3F.POSS glass-M.LOC-EMP close.3M.PFV.CVB
 ‘(...) the little prince shuts the flower_i under her_i glass (globe) every night and (...)’ (de Saint-Exupéry 2018: 91)

There are even several attested instances in which the reflexive noun is coreferential with an antecedent in an embedded clause: In (31), *gag-i-sí* ‘his own’ is coreferential with the direct object *manch-ú* ‘man’ [ACC] in the relative clause (RC). In (32), *gag-i-ssá* ‘their own’ is coreferential with the dative possessor in the conditional clause. In the adposessive domain, Kambaata thus violates the

cross-linguistic tendency of antecedent-reflexive asymmetry, which states that “[t]he antecedent must be higher on the rank scale of syntactic positions than the reflexive pronoun” (Haspelmath 2023: §7 [this volume]).¹⁰

- (31) [*Manch-ú_i* *abbíshsh* *gen-anó*]_{RC}
 person.SGV-M.ACC exceed.CAUS1.3M.PFV.CVB harm-3M.IPFV.REL
 díin-u_j *gag-i-sí_i* *ilam-íichch* *ful-áno*
 enemy-M.NOM self-M.GEN-3M.POSS relatives-M.ABL come.out-3M.IPFV
 ‘A person’s worst enemy is found among his relatives (lit. An enemy_j who harms a person_i very much comes out from his_i own relatives).’
 (Periphrasis of proverb in common speech, Alamu Banta Ataara & Alamaayyo G/Tsiyoon 2017: 115)

- (32) [*Ám-at* *il-áa_i* *ánn-u* *gizz-íi_j*
 mother-F.NOM children-F.DAT owner-M.NOM cattle-M.DAT
 yoo-ba'í=dda] *gag-i-ssá_{i+j}* *hé'-u<n>ku*
 COP1.3-NEG1.REL=COND self-M.GEN-3PL.POSS live-M.NOM<EMP>
 bárch-i-ta
 misery-F.PRED-F.COP2
 ‘If children_i have no mother (and) cattle_j no owner (lit. if there is not a mother for children (and) an owner for cattle) their_{i+j} life is a misery.’
 (Periphrasis of proverb in common speech, Alamu Banta Ataara & Alamaayyo G/Tsiyoon 2017: 10)

The use of the reflexive noun in the adposessive domain is optional and serves the purpose of emphasis. This can be illustrated with examples from natural language use, such as (33), in which possession is expressed by juxtaposing a regular genitive pronoun and a genitive reflexive noun.

- (33) *Kúun* *ammoonsíi kíi-haa-ba'a,* *íi-haa,*
 P_DEM1.M.NOM however 2SG.GEN-M.COP2-NEG1 1SG.GEN-M.COP2
 gag-í-'e-a<n>ka *béet-u*
 self-M.GEN-1SG.POSS-M.COP<EMP> son-M.PRED
 ‘But this is not yours, (it) is mine, (it) is my own son.’ [Narrative, TH2003-05-28_001]

¹⁰ A consulted native speaker confirmed that -sí could in principle also be coreferential with *díinu* ‘enemy’ [NOM] but that world knowledge would make a listener favor the first interpretation.

The optionality of the reflexive noun is also reflected in two variants of the same proverb in (34–35): the first uses the genitive pronoun *isé* [3F.GEN] ‘her’ (34),¹¹ while the second uses the reflexive noun *gag-i-sé* ‘her own’ (35).

- (34) *Ball-ó wonan-á mogga'-óo*
 mother.in.law-F.GEN enset.ring-M.ACC steal-3F.PFV.REL
 beet-i=biit isé beet-i ar-é bar-i
 son-M.GEN=NMLZ2.F.NOM 3F.GEN son-M.GEN wife-F.GEN day-M.ACC
 wonan-á hoog-gáa'i
 erset.ring-M.ACC loose-3F.IPFV
 ‘The son’s (wife) who stole (her) mother-in-law’s enset ring loses (her) enset ring on the day of her son’s wife(’s arrival).’ (Proverb variant 1, Geetaahun 2002: 28)
- (35) (... *gag-i-sé beet-i ar-é bar-i* (...)
 self-M.GEN-3F.POSS son-M.GEN wife-F.GEN day-M.ACC
 ‘(...) on the day of her own son’s wife(’s arrival).’ (Proverb variant 2, Alamu Banta Ataara & Alamaayyo G/Tsiyoon 2017: 24)

3.2.5 Bare reflexive noun

The possessive suffix on the reflexive noun can be dispensed with in contexts where the antecedent and the reflexive are impersonal or generic, as is often the case in proverbs (37), in conversations about traditions (38) or in general truths (39). The suffix is also missing in the idiom *gag-á daqq-* ‘become an adult, come of age (lit. find oneself)’.

- (36) *Gaazhzh-ó hór-u< n>ku gag-íi fun[n]úq*
 wage.war-3M.PFV.REL all-M.NOM<EMP> self-M.DAT shove.away.IDEO
 ‘All who wage war struggle for themselves (i.e. not for the collective good).’ (Proverb, Alamu Banta Ataara & Alamaayyo G/Tsiyoon 2017: 51)
- (37) (... *gag-í ilan-ch-ú, onxan-é ilan-ch-ú*
 self-M.GEN relatives-SGV-M.ACC nearness-F.GEN relatives-SGV-M.ACC
 moog-eennó-o ill-án qax-ée
 bury-3HON.IPFV.REL-NMLZ1.M.ACC reach-3M.IPFV.CVB extent-M.DAT

¹¹The enset (*Ensete ventricosum*) is a multi-purpose plant cultivated in the highlands of southern Ethiopia. The fermented corm, the fermented pulp and the starch are used for human consumption. Fresh or dried leaves, midribs and leaf sheaths as well as the fibers extracted from the plant serve to produce household utensils and packaging material.

waas-á qammas-áno-ba'a
enset.food-M.ACC take.a.bite-3M.IPFV-NEG1

'(...) (one) did not (even) take a bite of food until (people) buried one's relative, (one's) near relative.' [Conversation about mourning traditions, EK2016-02-23_003]

- (38) *Gag-á haww-iichch fa'-is-íi dánd-u ammóo*
self-M.ACC trouble-M.ABL be.saved-CAUS1-M.DAT be.able-M.NOM however
qoorím-a-ta
wisdom-F.PRED-F.COP2
(The horse advises the hare: It is good to have friends.) 'But being able to save oneself from trouble is wise(r).' (Kambaata Education Bureau 1989: 3.118)

3.3 Self-intensifying constructions

As in many languages of the world (see, among others, König & Siemund 2000; Gast & Siemund 2006; König et al. 2013), the reflexive noun *gag-á* is also used as a self-intensifier. The description in this section is preliminary, as the diverse non-reflexive functions of *gag-á* are not yet well understood and still require further investigation. However, my corpus clearly shows that *gag-á* has self-intensifying functions when used adnominally (in apposition to a preceding noun phrase) or on its own as an argument or adverbial adjunct. In the typological literature (König & Siemund 2000; Gast 2002; Gast & Siemund 2006), the adnominal use of self-intensifiers is associated with an alternative-evoking function (roughly paraphrasable as 'no one other than N', 'as opposed to others related to N'), whereas two functions linked to the adverbial use are labeled "adverbial-exclusive" or "actor-oriented" ('on one's own, alone, without help') and "adverbial-inclusive" or "additive" ('also, too'). However, in Kambaata, no correlation between syntactic position and meaning can be observed.¹²

In (39), *gag-á* is used in apposition to a subject noun with which it shares case and gender values. The central referent, *Kambáat-u* 'Kambaata people', is opposed to the contextually given foreign, non-native speaker of the Kambaata language.

¹²The following examples may give the (wrong) impression that the appositional use correlates with the alternative-evoking function and the non-appositional use with the "exclusive" and "inclusive" functions. This is, however, not the case, as other examples in my data show. Also note that – although all self-intensifiers in (39–41) are (parts of) subjects – alternative-evoking and "inclusive" self-intensifiers are also attested as direct objects, indirect objects, and predicates.

- (39) (...) *Kambáat-u gág-u< n>ku-s*
 Kambaata-M.NOM self-M.NOM<EMP>-3M.POSS
haasaaww-anó=hanni=g-a ass-ámm
 speak-3M.IPFV.REL=NMLZ2.M.GEN=SIM-M.ACC do-PASS.3M.PFV.CVB
hiir-ámm-ee'i-i ih-u
 translate-PASS-3M.PRF.REL-NMLZ1.M.NOM become-M.NOM
hasis-áno-a
 be.necessary-3M.IPFV.REL-M.COP2
 (Context: We didn't want that the dialogues in the book sounded as if they were spoken by a foreigner.) '(The book) had to be translated in a way (that it sounded) as if Kambaata people themselves would speak.'
 [Book launch speech, DW2018-03-12]

In (40), the self-intensifying *gag-á* expresses that the (male) addressee does not delegate or seek assistance but carries out the action himself.¹³ The example illustrates the so-called “adverbial-exclusive” function. The typological label is hardly suitable for Kambaata, as the self-intensifier is not used adverbially in (40) but is the subject of the main clause.¹⁴

- (40) (...) *át harde'-oom-áan yoontí j-áata qabatt-ón*
 2SG.NOM youngsters-STAT-F.LOC COP1.2SG.REL time-F.ACC belt-F.ICP
gág-u-kki-n qo'rr-ít
 self-M.NOM-2SG.POSS-EMP gird.MID-2SG.PFV.CVB
has-soontí=b-a mar-táant ikke
 want-2SG.PFV.REL=PLC-M.ACC go-2SG.IPFV PST
 (John 21:18) ‘When you were in your youth you dressed yourself and went where you wanted.’ (Following context: But when you are old you will stretch out your hands, and someone else will dress you and lead you where you do not want to go.) (Kambaata and Hadiyya Translation Project Hosaina 2005: 95)

The third self-intensifying function, the so-called “adverbial-inclusive” function, is exemplified in (41). Again, the self-intensifier is not used adverbially in Kambaata but on its own as the subject.

¹³See also (42).

¹⁴Note, however, that ‘on one's own’ could, alternatively, be expressed by the ICP-marked form of ‘self’, i.e. [*gag-iin-poss*] ‘by, with, through oneself’, in adverbial function.

- (41) (...) *hamiil-agúd-aa bonx-ichch-í al-éen qakkíchch-ut*
 cabbage-seem-M.OBL leaf-SGV-M.GEN top-M.LOC tiny.SGV-F.NOM
gaaroríin-ch-ut afuu'll-ítee'; gág-u< n>ku-se-n
 chameleon-SGV-F.NOM sit-3F.PRF self-M.NOM<EMP>-3F.POSS-EMP
hamiil-agud-áta agud-dáyyoo'u
 cabbage-seem-F.ACC seem-3F.PROG
 (The chameleon, which we, which I see here now,) the tiny chameleon
 sits on a cabbage-colored leaf; (and) she, too (lit. herself), seems
 cabbage-colored.' [Narrative, TD2016-02-11_001]

One and the same clause can contain two forms of *gag-á*, one in reflexive and the other in self-intensifying use, as seen in (42). The genitive form *gag-i-kkí* (lit.) ‘your self’s’ indicates coreference between the 2SG subject and the possessor, the nominative form *gág-u-kk* stressed that the addressee has to enforce their rights on their own.

- (42) *Gag-i-kkí gar-ítá gág-u-kk aphph-íi*
 self-M.GEN-2SG.POSS right-F.ACC self-M.NOM-2SG.POSS grab.MID-M.DAT
aphphám-i
 struggle-2SG.IMP
 ‘Enforce (lit. struggle to grab) your own rights yourself!’ (i.e. Nobody grants them to you.) (Periphrasis of a proverb, Alamu Banta Ataara & Alamaayyo G/Tsiyoon 2017: 138)

Self-intensifying functions constitute only a subset of the non-reflexive uses of *gag-á*. The corpus also shows it in contexts such as (43), in which *gag-á* does not lend itself to a self-intensifying interpretation. With respect to (43), a native speaker I consulted considered it interchangeable with a free personal pronoun (§2.1), which here would be *isso'ootí-i* [3PL.NOM-ADD].¹⁵

- (43) (...) *gag-u-ssá-a ammóo ma'nn-ítá*
 self-M.NOM-3PL.POSS-ADD and place-F.ACC
af-fúmb-u-a=rr-a (...)
 take-3F.NEG5-M.PRED-M.COP2=NMLZ4-M.PRED
 (Context: They had only one ring of petals,) and they (lit. themselves) took up no room (...).’ (de Saint-Exupéry 2018: 30)

¹⁵Note also that in a synonym matching exercise in a schoolbook, *gág-u-nne* [self-M.NOM-1PL.POSS] ‘ourselves’ has to be paired with the personal pronoun *na'ót* [1PL.NOM] ‘we’ (Kambaata Education Bureau 1989: 4.122).

4 Middle derivation

Kambaata verb roots end in a single consonant or a consonant cluster.¹⁶ The root can be followed by one or several word-class maintaining or word-class changing derivational morphemes, which in turn are followed by inflectional morphemes. The most productive derivational categories on verbs are causative, passive, middle and reciprocal. Kambaata has a short (or simple) causative -(i)s [CAUS1] and a long (or double) causative -(i)siis [CAUS2]. Their distribution is partly determined by the valency of the base, but is also partly lexicalized (and thus not predictable). The passive is marked by -am, e.g. *shol-* ‘cook’ > *shol-am-* ‘be cooked’, *biix-* ‘break (tr.)’ > *biix-am-* ‘be broken, break (intr.)’. Kambaata only has one labile verb: *gid-* ‘be(come) non-tactile cold; make (someone) feel non-tactile cold’.

The middle is realized by two predominately phonologically conditioned allomorphs: -*aqq* /ak'/ and -'/?/. The first allomorph is used on verb stems ending in a consonant cluster, e.g. *iyy-* ‘carry’ > MID: *iyy-aqq-* ‘carry for one’s benefit, endure’, *quss-* ‘rub’ > *quss-aqq-* ‘rub oneself’, or on stems ending in an ejective consonant, e.g. *x* /t'/ in *maax-* ‘hide’ > *maax-aqq-* ‘hide for/in oneself’. The second allomorph is suffixed to stems that end in a sonorant, that in turn triggers metathesis to satisfy the phonotactic constraints of Kambaata, see e.g. *mur-* ‘cut’ > *mu'r'-/mu?r-/* ‘cut oneself’, *fan-* ‘open’ > *fa'nn-/fa?n-/* ‘open for one’s benefit’. Stems ending in a single obstruent can either be marked as middle with -*aqq*, e.g. *xuud-* ‘see’ > *xuud-aqq-* ‘see, consider oneself’, or with the second allomorph. In the latter case, the sequence of an obstruent plus a glottal stop is realized as a geminate ejective consonant, e.g. /g+?/ = /k'/ in *dag-* ‘know, find’ > *daqq-* ‘know, find for one’s benefit’ and /f+?/ = /p'/ in *huf-* ‘comb’ > *hupph-* ‘comb oneself’. The choice of the first or second allomorph after single obstruents seems partly lexically determined, partly a case of free variation.

The middle does not reduce the valency of the verb. It has three discernibly different functions, the expression of autobenefactivity (§4.1), reflexivity (§4.2) and emotional involvement of the speaker (§4.3). The middle is also part of the reciprocal derivation (§4.4).

4.1 Autobenefactive

As in all East Cushitic languages (cf. Mous 2004), the most productive interpretation of the middle marker in Kambaata is to express that the subject of the clause

¹⁶Only a single verb root ends in a vowel: *re-* ‘die’. If the root is followed by a vowel-initial morpheme, *h* is inserted to avoid a vowel sequence.

is the beneficiary of the event expressed by the verb. There are apparently no semantic restrictions on the verbs that can be used with an autobenefactive middle marker. In (44) the autobenefactive middle morpheme is on the verb *laa'll-* ‘search and call (for a missing animal)’, in (45) on the verb *xa'mm-* ‘ask’, and in (46) on the verbs *ass-* ‘do’ (irregular middle form: *eecc-*) and *min-* ‘build’.

- (44) *Laa'll-aqq-ayyoo'í-i xuud-eemma=dá-a*
 search.call-MID-3M.PROG.REL-NMLZ1.M.ACC see-3HON.PFV.REL=COND-ADD
m-á y-éen maassa'-éenno-la?
 what-M.ACC say-3HON.PFV.CVB bless-3HON.IPFV-MIT
 ‘And if one comes across (lit. sees) someone who is searching and calling (for a missing animal) for his/her own benefit, what does one say to bless (him/her)?’ [Conversation on blessings, AN2016-02-19_002]
- (45) *Mát-u qabaaxxáam-u adab-óohu qabaaxxáam-oa<ñ>ka*
 one-M.NOM rich-M.NOM boy-M.NOM rich-M.OBL<EMP>
manch-í min-í márr-ee'u, beet-úta
 person.SGV-M.GEN house-M.GEN go-3M.PRF daughter-F.ACC
xa'mm-aqq-óta
 ask-MID-3M.PURP.SS
 ‘A rich young man (lit. boy) went to a rich man’s house in order to ask for the daughter for his own benefit.’ [Narrative, EK2016-02-12_003]
- (46) *Gizz-á hoolam-á ir-á xáaz-z*
 money-M.ACC much-M.ACC time-M.ACC gather-3F.PFV.CVB
qú'mm=eecc-ít min-í mi'nn-itóo'u
 gather=do.MID-3F.PFV.CVB house-M.ACC build.MID-3F.PFV
 ‘After having saved money for many years, they could build a house for their own benefit.’ [Elicited, DW2020-01-24]

The autobenefactive function of the middle derivation could, in principle, also be analyzed as a subtype of the reflexivizing function, namely as one indicating coreference of the subject and a dative beneficiary adjunct.

4.2 Reflexive

In (4), the middle derivation was shown to be able to mark on its own that the subject and the direct (accusative) object are coreferential; another example is given in (47). Overall, however, examples of this type seem to be rare. There are

no clear cases in which the middle derivation alone marks coreference of the subject and a participant other than the direct object (if we exclude the beneficiary adjunct of §4.1). And even in prototypical reflexive situations, as in (4) and (47), the middle morpheme is often not the only reflexivizer but rather an additional reflexivizing device besides the reflexive noun, as elaborated on at the end of this section.

- (47) *Sull-aqq-ée'u*
choke.with.rope-MID-3M.PFV
(Speaking about the actual cause of someone's death whom the addressee thought to have died from an illness) 'He hanged himself.' [Elicited, DW2020-01-24]

In contrast, we commonly find the middle morpheme on verbs of grooming and bodily care in Kambaata. Grooming and bodily care is typically self-directed, so the coreference of the carer and the cared is expected, and in many languages of the world, this coreference relations remains unmarked or marked by shorter morphemes if compared to the marking of prototypical reflexive situations (cf. Kemmer 1994). In Kambaata, with verbs of grooming and bodily care, reflexivity cannot be doubly expressed by a middle morpheme and a reflexive noun. If the noun *gag-á* 'self' is used with such verbs, it does not have a reflexive but a self-intensifying meaning; recall the self-intensifier with the verb *qo'rr-* 'gird' in (40).

Sometimes the root from which a middle verb was derived is not, or is no longer, attested in the language, and the middle verb forms a pair with a causative verb (Table 4). Here the speaker is bound to overtly express whether the action is carried out by the subject on him- or herself, or on someone else.

- (48) *Bór-a gassim-á xóqq=y-it miin-í-se*
PN-F.NOM morning-M.ACC get.up=say-3F.PFV.CVB face-F.ACC-3F.POSS
aa'll-it odd-aqq-it huphph-it
wash.MID-3F.PFV.CVB put.on-MID-3F.PFV.CVB comb.MID-3F.PFV.CVB
xaaloot-á mar-tóo'u
church-M.ACC go-3F.PFV
'Bora got up in the morning, washed her face, got dressed, combed her hair and went to church.' [Elicited, DW2020-01-24]

The middle verbs in Table 5 are based on a verb root that usually¹⁷ expresses that an action of bodily care is carried out on a person that is non-coreferential

¹⁷In the corpus we also find some rare examples in which the unextended verb root is used even if the target of bodily care is the subject itself.

Table 4: Grooming verbs (middle vs. causative stem)

Root		Derivative	Translation
*aal-	MID	<i>aa'll-</i> (48)	'wash (oneself)'
	CAUS1	<i>aansh-</i>	'wash (something/someone)'
*odd-	MID	<i>odd-aqq-</i> (48)	'wear, put on (one's clothes)'
	CAUS1	<i>odd-iis-</i>	'have (someone) wear, put on (clothes)'
*gunguul-	MID	<i>gunguu'll-</i>	'cover one's head'
	CAUS1	<i>gunguushsh-</i>	'cover someone's head'
*qor-	MID	<i>qo'rr-</i> (40)	'gird, put on (belt, skirt, trousers)'
	CAUS2	<i>qor-siis-</i>	'have (someone) gird, put on (belt, skirt, trousers)'

with the subject. In contrast, the middle-derived form can only be interpreted as expressing coreference between the subject and the patient of bodily care. The clothes that are put on and the body parts that are the targets of bodily care can be overtly expressed as accusative objects, irrespective of whether the middle verb is of the type given in Table 4 or in Table 5; see, e.g. *miin-i-se* 'her face' in (48).

Table 5: Grooming verbs (root vs. middle stem)

Root	Translation	Middle	Translation
<i>buur-</i>	'butter, anoint (s.o.)'	<i>buu'rr-</i>	'butter, anoint (oneself)'
<i>dad-</i>	'braid, plait (s.o.'s hair)'	<i>daxx-</i>	'braid, plait (one's own hair)'
<i>huf-</i>	'comb (s.o.'s hair)'	<i>huphph-</i>	'comb (one's own hair)' (48)
<i>meed-</i>	'shave (s.o.)'	<i>meexx-</i>	'shave (oneself)'
<i>miiq-</i>	'brush (s.o.'s) teeth'	<i>miiq-aqq-</i>	'brush (one's own) teeth'
<i>xaax-</i>	'wrap, tie around, have (s.o.) wear (e.g. a scarf)'	<i>xaax-aqq-</i>	'wrap, tie around (oneself), wear (e.g. a scarf)'

In cases of non-default coreference of subject and direct object (in the prototypical reflexive situation), it is common to find two reflexivizers, the reflexive noun and the middle derivation, in the same clause, as we saw in (5) and is further illustrated in (49–50). The reflexive noun seems to be the primary reflexivizer and

the middle derivation an addition. The native speaker I consulted was reluctant to omit the reflexive nouns in (50) and preferred the combination of the nominal and verbal reflexivizer. (An autobenefactive interpretation of the middle derivation in 50 can be excluded.)

- (49) *Gag-á-*' *egexx-ii* *dand-áam-ba'a*
 self-M.ACC-1SG.POSS hold.up.MID-M.DAT be.able-1SG.IPFV-NEG1
 'I cannot contain myself.' (de Saint-Exupéry 2018: 37)
- (50) *Jáal-a-*' *gag-á-se* *abbís-s*
 friend-F.NOM-1SG.POSS self-M.ACC-3F.POSS exceed.CAUS1-3F.PFV.CVB
qac-úta *lókk-a-se* *ammóo culú=at-tumb-úuta*
 thin-F.ACC leg-F.NOM-3F.POSS and beautiful=do-3F.NEG5-NMLZ1.F.ACC
ass-ít *xuud-aqq-ít* *gag-á-se*
 do-3F.PFV.CVB see-MID-3F.PFV.CVB self-M.ACC-3F.POSS
shigíg=eecc-ít *bá'-ee-taa*
 repel=do.MID-3F.PFV.CVB do.very.much-3F.PRF.REL-F.COP2
 'My friend considers herself too thin (and) her legs ugly, she hates herself deeply.' [Elicited, DW2020-01-24]

4.3 Emotional involvement

The middle derivation has also acquired an intersubjective meaning and expresses the emotional involvement of the speaker – and not the subject – in a state-of-affairs. The three functions of the middle derivation – reflexive, autobenefactive and emotive – are contrasted in (51–53), which all contain the verb *aass-* ‘give’. In (51), the subject and the indirect object, the recipient of ‘give’, are coreferential. In (52), the subject is the beneficiary of a gift (or rather a bribe), but not the recipient. In (53), the speaker is emotionally touched by the event that he observes.

- (51) Reflexive
Gag-íiha-n-se *abb-áta* *ma'nn-ítá* *aass-aqq-itóó'u*
 self-M.DAT-L-3F.POSS big-F.ACC place-F.ACC give-MID-3F.PFV
 'She attributed (lit. gave) an important place to herself.' [Elicited,
 DW2020-01-24]

- (52) Autobenefactive

Dáann-u isíi fírd-unta-s gizz-á
 judge-M.NOM 3M.DAT judge-3M.PURP.DS-3M.OBJ money-M.ACC
aass-aqq-ée'u
 give-MID-3M.PFV

‘So that the judge would decide for him, he gave (the judge) money for his own benefit.’ [Elicited, DW2020-01-24]

- (53) Emotive

Ább-u mánn-u aass-áni-yan xúujj
 big-M.NOM people-M.NOM give-3M.IPFV.CVB-DS see.3M.PFV.CVB
civil-uhú-u *m-á-ndo* *aass-aqq-ée'u*
 infant-M.NOM-ADD what-M.ACC-Q give-MID-3M.PFV

(How amazing! How moving!) ‘The little child saw adults give (something, e.g. to the guests), then he also gave something (to them).’
 [Elicited, DW2020-01-24]

4.4 Reciprocity

A sequence of a middle and a passive morpheme regularly gives rise to a reciprocal, e.g. *gomb*-‘push’ > *gomb-aqq-am*-‘push each other’, *dag*-‘find’ > (**dag-?**am*->) *daqq-am*-‘meet (lit. find each other)’ (25), *mazees*-‘injure’ > (**mazees-?**am*->) *mazeecc-am*-‘injure each other’, *y*-‘say’ > *y-aqq-am*-‘say to each other’ (54).

- (54) *Āā, āā, kúun* *y-aqq-am-móommi-a* *bár-i*
 yes yes P_DEM1.M.NOM say-MID-PASS-1PL.PFV.REL-M.COP2 day-M.PRED
 ‘Yes, yes, it is the day we agreed on (lit. we said to each other).’
 (de Saint-Exupéry 2018: 83)

5 Conclusions

Kambaata has a nominal and a verbal reflexivizer, both of which are multifunctional and also used in non-reflexive functions.

The reflexive noun *gag-á* ‘self’, which regularly combines with a possessive suffix, is primarily used to signal that the direct, indirect or oblique object is coreferential with the subject of the same clause. If the reflexive noun were replaced by a free personal pronoun or a bound object pronoun on the verb, the subject and these object pronouns would necessarily be considered referentially

disjoint. While the reflexive noun most commonly expresses a coreference relation between arguments of a minimal clause (§3.2.1, §3.2.2), I have also presented evidence that the antecedent of *gag-á* ‘self’ can be found outside this restricted syntactic domain. Examples in which the reflexive noun in an infinite or finite subordinate clause is coreferential with the subject of the matrix clause justify the analysis of *gag-á* ‘self’ as a long-distance reflexive (§3.2.3).

Whereas a non-reflexive (in)direct or oblique object pronoun rules out a coreference relation with the subject NP, an adnominal possessor of a non-subject noun phrase can be interpreted in two ways: as coreferential or non-coreferential with the subject. In the adposessive domain, the reflexive noun serves to signal coreference explicitly and thus has a disambiguating function. As shown in §3.2.4, the antecedent of the adnominal reflexive noun is not necessarily the subject of the clause but may also be another participant, even in a subordinate clause.

Apart from having a reflexive function, the noun *gag-á* ‘self’ is also used as a self-intensifier (§3.3).

The middle derivation *-aqq/-'* can serve as a reflexivizer in prototypical reflexive situations, i.e. situations in which coreference between arguments is unexpected. It can only signal coreference between the subject and a direct (accusative) object – but even in this context it is rarely the only reflexivizing means in its clause. Instead it often cooccurs with a reflexive noun (§4.2). In less typical reflexive situations in which subject-object coreference (self-affectedness of the subject) is the default, as in the case of grooming and bodily care, the middle morpheme is used as the sole marker of coreference. If the noun *gag-á* ‘self’ occurs in the clause of grooming and bodily care verbs, it necessarily has a self-intensifying function. As in related East Cushitic languages, the most productive synchronic function of the middle derivation is the expression of autobenefactivity (§4.1). In Kambaata, it has furthermore adopted an intersubjective interpretation (§4.3).

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ADEM	adjectival demonstrative	MULT	multiplicative
ADD	additive	PDEM	pronominal demonstrative
AG	agentive	PLC	place nominalizer
BDV	benedictive	PLV	plurative
CRD	coordinative	PN	proper noun
DISJ	disjunctor	PURP	purposive
DS	different subject	REAS	reason clause marker
EMP	emphasis	RED	reduplication
HON	honorific, impersonal	SEQ	sequential
ICP	instrumental-comitative- perative	SGV	singulative
IDEO	ideophone	SIM	similative, manner
L	linker	SS	same subject
MID	middle	STAT	status noun derivation
MIT	mitigator		

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Chapter 7

Reflexive constructions in Luganda

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This chapter describes the reflexive construction in Luganda, a Great Lakes Bantu language spoken in Uganda. The reflexive construction in Luganda is formed with the invariable reflexivizer *ee-*, a verbal prefix immediately preceding the stem, which can be reconstructed to Proto-Bantu. There are no reflexive pronouns in Luganda. The prefix is obligatorily used to express coreference between the subject and the patient object in transitive verbs and there is no difference between introverted and extroverted verbs. The reflexivizer is also employed in case of coreference between an applied beneficiary and the subject. Apart from morphologically and semantically transparent reflexive constructions, Luganda also has a considerable number of fossilized reflexive verbs.

1 Introduction

Luganda (or Ganda) is a Bantu language. It belongs to the West Nyanza branch of the Great Lakes Bantu languages of the East Bantu branch (on genealogical classification see Schoenbrun 1994, 1997). It is spoken by the Baganda people primarily in the Central region of Uganda, which is coterminous with the Kingdom of Buganda (see Figure 1). As of 2014, 5.56 million Ugandans identified themselves as being ethnically Baganda (Uganda Bureau of Statistics 2016). In addition





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Figure 1: Map of the Kingdom of Buganda

to English, Luganda is also used as a lingua franca across Uganda (Isingoma & Meierkord 2016; Namyalo et al. 2016).

The basic word order of Luganda is SVO, as is the case for the vast majority of Bantu languages, however, information structure considerations motivate various deviations from this basic word order (see e.g. Downing & Marten 2019). Nominal and verbal inflectional morphology is primarily prefixing. Nominal morphology is characterized by a system of noun class prefixes. Each noun in singular and plural belongs to one of the 23 noun classes. The noun classes are numbered from 1 to 23 corresponding to the reconstructed Proto-Bantu noun classes (see e.g. Van de Velde 2019: 237–239). The nominal prefixes on the nouns are not segmented in the examples, the gloss indicates the inherent noun class in round brackets after the respective noun gloss. For instance, we do not segment the class 2 prefix *ba-* in *abakazi* ‘women’ in (1a) but we indicated that this noun belongs to noun class 2 in the gloss ‘women(2)’. Luganda nouns regularly carry an augment, also known as pre-prefix or initial vowel (see e.g. Van de Velde 2019: 247–255). The augment appears before the noun class prefix and has the forms *a-*, *o-*, or *e-*, e.g. *a-ba-kazi* [AUG-2-woman] ‘women’ in (1a). The augment is neither

segmented nor glossed in the examples in this paper. The noun class determines the shape of the agreement prefixes on dependents in a noun phrase, on the verb, as well as on a number of other constituents of the clause. We indicate the noun class agreement prefixes on dependents by segmenting them and providing the respective class number in Arabic numerals, as in the case of the subject prefix *ba-* [2SBJ] on the verb *ba-n-walan-a* [2SBJ-1SG.OBJ-hate-FV] in (1a). Most examples have class 1 or 2 subject agreement prefixes on the verb which index human singular and plural referents respectively. We also use Arabic numerals to indicate person indexing on the verb, as well as person information on pronouns. Note that in this case the Arabic numerals are always followed by the indication of number [SG or PL], for instance, *n-* [1SG.OBJ] in (1a). Verbs have multiple slots for inflectional morphology. Prefixes express such inflectional categories as negation, tense and aspect, as well as argument indexing (subject and optionally one or more objects). Suffixes express most voice categories, such as the causative and applicative, as well as some other inflectional categories, such as aspect and mood.

Luganda is a tone language and the tone of the reflexive prefix is reported to have different properties than the tone of object prefixes in many Bantu languages (e.g. Marlo 2015a), including closely related ones, such as Nkore (Poletto 1998), but it goes beyond the scope of this paper to consider the tonal properties of the Luganda reflexive prefix and its effect in the tone of the verb form. Tone is not marked in the standard orthography and we omit it from the examples.

The data used in the present study come primarily from elicitation with two native speakers carried out in 2019–2020. They were supplemented with authentic examples from a corpus of naturalistic spoken language (over 50,000 words collected in 2019 in Kampala) and written language (over 200,000 words). Each example is indicated as coming from one of these sources with the labels ‘elicited’, ‘spoken’ and ‘written’. The article is organized as follows. §2 discusses the basic uses of the reflexive prefix *ee-*. §3 addresses the contrast between body-part and whole-body actions. §4–§6 describe various aspects of coreference properties. §7 outlines the uses of the specialized reflexive form in other functions. A conclusion is given in §8.

2 The reflexive prefix *ee-* and its basic uses

Luganda does not have reflexive pronouns. The Luganda reflexive prefix *éé-* (*ee-* in the rest of the paper) is used independently of the person or noun class of the subject. It derives from the common Bantu reflexive marker, reconstructed in

Proto-Bantu as *-(*j*)*i*- (Meeussen 1967: 109–110). The reflexive marker is a prefix and immediately precedes the verb stem. Its position thus differs from all other Luganda affixes used to express the grammatical category of voice (often called *extensions* in Bantu literature), such as applicative, causative, passive and reciprocal, which are suffixes (see e.g. Schadeberg & Bostoen 2019: 173).

The reflexive prefix *ee-* is obligatorily used when the patient argument of a transitive verb is coreferential with its agent argument in the subject function. The examples in (1a–1b) have non-coreferential agents and patients. In (1a) the pronominal patient is expressed by the pronominal index *n-* [1SG.OBJ] in the object slot, whereas in (1b) the nominal patient is expressed by the noun *abalokole* ‘born-again Christians’ following the verb. The examples in (2) have coreferential agents and patients and employ the prefix *ee-* in the object slot of the verb. As these examples illustrate, the same prefix is used with various person and number categories. Examples in (3) support this point by providing an illustration with a different verb.

- (1) a. *Abakazi bampalana.*
abakazi ba-n-walan-a
women(2) 2SBJ-1SG.OBJ-hate-FV
'Women hate me.' [written]
- b. *Muwalana abalokole.*
mu-walan-a abalokole
1SBJ-hate-FV born_agains(2)
'He hates born-again Christians.' [spoken]
- (2) a. *Neewalana.*
n-ee-walan-a
1SG.SBJ-REFL-hate-FV
'I hate myself.' [elicited]
- b. *Weewalana.*
o-ee-walan-a
2SG.SBJ-REFL-hate-FV
'You hate yourself.' [elicited]
- c. *Mukwano gwange yeewalana.*
mukwano gu-ange a-ee-walan-a
friend(1) 1-1SG.POSS 1SBJ-REFL-hate-FV
'My friend hates himself/herself.' [elicited]

- d. *Tweewalana.*
 tu-ee-walan-a
 1PL.SBJ-REFL-hate-FV
 ‘We hate ourselves.’ [elicited]
- e. *Mweewalana.*
 mu-ee-walan-a
 2PL.SBJ-REFL-hate-FV
 ‘You hate yourselves.’ [elicited]
- f. *Beewalana.*
 ba-ee-walan-a
 2SBJ-REFL-hate-FV
 ‘They hate themselves.’ [elicited]
- (3) a. *Neerabye* *mu* *ndabirwamu.*
 n-ee-labye mu ndabirwamu
 1SG.SBJ-REFL-see.PFV 18.LOC mirror(9)
 ‘I saw myself in the mirror.’ [elicited]
- b. *John yeerabye* *mu* *ndabirwamu.*
 John a-a-ee-labye mu ndabirwamu
 John(1) 1SBJ-PST-REFL-see.PFV 18.LOC mirror(9)
 ‘John saw himself in the mirror.’ [elicited]

Following Haiman (1985) and König & Vezzosi (2004) we distinguish between introverted verbs, which denote an action typically performed on oneself, such as grooming verbs, and extroverted verbs, which denote an action typically performed on others. The Luganda construction with the reflexive prefix *ee-* is used to express autopathic situations with a wide range of extroverted verbs including ‘hate’ in (2) above, ‘see’ in (3), ‘kill’ in (4), ‘bite’ in (5), ‘criticize’ in (6), and ‘praise’ in (7).

- (4) *Omusajja yetta.*
 omusajja a-ee-tta-a
 man(1) 1SBJ-REFL-kill-FV
 ‘The man killed himself.’ [elicited]
- (5) *Embwa yeeruma.*
 embwa e-a-ee-rum-a
 dog(9) 9SBJ-PST-REFL-bite-FV
 ‘The dog bit itself.’ [elicited]

- (6) Peter *yeekolokota.*

Peter a-ee-kolokot-a

Peter(1) 1SBJ-REFL-critisize-FV

'Peter criticizes himself' [elicited]

- (7) *Ssaalongo atandika okwewaana nga bwali*
ssaalongo a-tandik-a oku-ee-waan-a nga bu-a-li
husband(1) 1SBJ-start-FV INF-REFL-praise-FV how 14SBJ-PST-COP
ssemaka.

ssemaka

head_of_household(1)

'The husband starts to praise himself for being the head of the family.'
[written]

Introverted actions are expressed either by intransitive verbs or transitive verbs with a reflexive prefix. A few intransitive grooming verbs denote situations where the agent and the patient of an action have the same referent. These are *naaba* 'wash (oneself), clean up, bathe', as in (8a), and *yambala* 'dress, get dressed', as in (8b).

- (8) a. *Yabadde afulumye okunaaba.*
a-a-badde a-fulumye oku-naab-a
1SBJ-PST-AUX 1SBJ-go_out.PFV INF-bathe-FV

'She had gone outside to bathe.' [written]

- b. *Omukyala anyirira ayambala bulungi.*
omukyala a-nyirir-a a-yambal-a bulungi
wife(1) 1SBJ-look_good-FV 1SBJ-dress-FV nicely
'The wife looks good, she dresses nicely.' [spoken]

To express other introverted actions, transitive verbs with the reflexive prefix are employed. These include the reflexive *ee-yambula* 'to undress (oneself)' derived from the transitive *yambula* 'undress (somebody), take off (a piece of garment)', the reflexive *ee-mwa* 'shave (oneself)', as in (9a), derived from the transitive *mwa* 'shave (somebody or something)', the reflexive *ee-sanirira* 'comb (one's hair)', as in (10a), derived from the transitive *sanirira* 'comb (e.g. hair)', as well as *ee-naaza* 'wash (oneself)' in (9b), which is the reflexive of the transitive causative verb *naaza* derived from the intransitive verb *naaba* 'wash (oneself)', illustrated above in (8a).

- (9) a. *Yeemwa.*
 a-a-ee-mwa-a
 1SBJ-PST-REFL-shave-FV
 'He shaved (himself)' [elicited]
- b. *Embwa yali yeenaza.*
 embwa e-a-li e-ee-naaz-a
 dog(9) 9SBJ-PST.be 9SBJ-REFL-wash.CAUS-FV
 'The dog was washing itself.' [elicited]

3 Contrast between body-part and whole-body actions

With most grooming verbs Luganda encodes whole-body actions (washing, bathing, getting a shave, scratching) using the reflexive construction outlined in §2, as in (10a), (11a), and (12a). Body-part actions (e.g. combing or shaving hair or scratching a body part) allow a range of constructions: a transitive construction with the respective body part expressed as the object, as in (10b), (11b), and (12b), a reflexive construction with a body part expressed as an oblique and marked by the locative preposition (nominal class 18) *mu*, as in (11c), and a reflexive construction with a body part expressed as an object, as in (11d) and (12c). The respective body parts in (11d) and (12c) retain at least some of the properties of the morpho-syntactic object: apart from not being flagged, they can be indexed on the verb when fronted, as in (11e).

- (10) a. *John yeesaniridde.*
 John a-a-ee-saniridde
 John(1) 1SBJ-PST-REFL-comb.PFV
 'John combed his hair (lit. combed himself).' [elicited]
- b. *John yasaniridde enviiri (ze).*
 John a-a-saniridde enviiri ze
 John(1) 1SBJ-PST-comb.PFV hair(10) 10.1POSS
 'John combed his hair.' [elicited]
- (11) a. *Yeetakula.*
 a-a-ee-takul-a
 1SBJ-PST-REFL-scratch-FV
 'He scratched himself.' [elicited]

- b. *Yatakula* *omugongo (gwe)*.
 a-a-takul-a omugongo gwe
 1SBJ-PST-scratch-FV back(3) 3.1POSS
 'He scratched his back.' [elicited]
 - c. *Yeetakula* *mu mugongo*.
 a-a-ee-takul-a mu mugongo
 1SBJ-PST-REFL-scratch-FV 18.LOC back(3)
 'He scratched himself on the back.' [elicited]
 - d. *Yeetakula* *omugongo*.
 a-a-ee-takul-a omugongo
 1SBJ-PST-REFL-scratch-FV back(3)
 'He scratched his back.' [elicited]
 - e. *Omugongo agwetakula* *buli kiro*.
 omugongo a-gu-ee-takul-a buli kiro
 back(3) 1SBJ-3OBJ-REFL-scratch-FV every night(7)
 'He scratches his back every night.' [elicited]
- (12) a. *Yeemwa*.
 a-a-ee-mwa-a
 1SBJ-PST-REFL-shave-FV
 'He shaved (himself).' [elicited]
- b. *Abasajja baamwa* *ebirevu byabwe*.
 abasajja ba-a-mw-a ebirevu bi-abwe
 men(2) 2SBJ-PST-shave-FV beards(8) 8-2POSS
 'The men shaved their beards.' [elicited]
 - c. *Abasajja beemwa* *ebirevu*.
 abasajja ba-a-ee-mw-a ebirevu
 men(2) 2SBJ-PST-REFL-shave-FV beards(8)
 'The men shaved their beards.' [elicited]

In contrast to the patterns outlined above, the intransitive verb *naaba* 'wash (oneself), clean up, bathe' illustrated in (8a) allows for only one way to express the relevant body part, viz. as an oblique phrase with the preposition *mu*, compare (13a–13b).

- (13) a. *Nanaaba*.
 n-a-naab-a
 1SG.SBJ-PST-bath-FV
 'I bathed/took a bath/washed myself.' [elicited]

- b. *Nanaaba mu ngalo.*
 n-a-naab-a mu ngalo
 1SG.SBJ-PST-bath-FV 18.LOC hands(10)
 'I washed my hands.' [elicited]

4 Coreference properties

This section discusses coreference properties of the reflexive construction. In §4.1 we discuss the coreference of the subject and various semantic roles. §4.2 discusses the coreference between non-subject arguments.

4.1 Coreference of the subject with various semantic roles

In this section we discuss the marking of the coreference of the subject and various semantic roles. We first consider the coreference between the subject and the possessor, as well as spatial referents, which is not overtly indicated in Luganda. We then discuss the coreference of the subject with the recipient with lexical ditransitive verbs and with the beneficiary of applicative verbs, which both use the regular reflexive prefix *ee-*.

The coreference of the subject and of a possessor is not overtly indicated in Luganda: regular possessive pronouns are used and result in ambiguity between a coreferential reading and the reading with disjoint reference, as in (14). For instance, the example from the corpus in (14c) is open to multiple interpretations and only the context resolves the ambiguity: the house belongs to the official of the king.

- (14) a. *Yatwala manvuuli ye.*
 a-a-twala manvuuli ye
 1SBJ-PST-take-FV umbrella(9) 9.1POSS
 'He_i/she_j took his_i/her_j/umbrella.' [elicited]
- b. *John asoma ekitabo kye.*
 John a-som-a ekitabo kye
 John(1) 1SBJ-read-FV book(7) 7.1POSS
 'John_i reads his_i/her_j book.' [elicited]
- c. *Omukungu wa Kabaka ali mu kattu oluvannyuma*
 omukungu wa Kabaka a-li mu kattu oluvannyuma
 official(1) 1.GEN king(1) 1SBJ-COP 18.LOC dilemma(12) after

lw' omukazi omukadde okufira mu maka ge.
 lw' omukazi omukadde oku-fir-a mu maka ge
 11.GEN woman(1) old(1) INF-die.APPL-FV 18.LOC house(6) 6.1POSS
 'An official_i of the King is in dilemma after the death of an old lady_k
 in his_{i/j}/her_{k/l} house.' [written]

The coreference of the subject and a spatial referent is not overtly coded either. Regular pronominal forms, such as the nominal class 1 pronoun *we* 'he/she' in (15), are used and the interpretation of their reference is determined by the context.

- (15) a. *Yalaba omusota wabbali we.*
 a-a-lab-a omusota wabbali we
 1SBJ-PST-see-FV snake(3) besides 1
 'She_i saw a snake beside her_{i/j}/him.' [elicited]
- b. *Yaleka emikululo emabega we.*
 a-a-lek-a emikululo emabega we
 1SBJ-PST-leave-FV traces(4) behind 1
 'She_i left traces behind her_{i/j}/him.' [elicited]

With ditransitive lexical verbs, both objects are not overtly flagged and can be indexed on the verb, as in (16). The first token of the verb *wa* 'give' indexes only the recipient, the theme is expressed by the noun *olukusa* 'permission(11)', whereas the second token of *wa* 'give' indexes both objects, in this case the theme prefix *lu-* [11OBJ] (indexing *olukusa* 'permission(11)') precedes the recipient prefix of noun class 1 *mu-* [1OBJ]. When the recipient is coreferential with the subject, the respective person index is replaced with the regular reflexive prefix *ee-*, as in (17). The theme can either be expressed by a noun phrase, e.g. *ekirabo* 'present(7)' in (17a), or by a theme index which precedes the reflexive prefix, as e.g. the class 7 prefix *ki-* in (17b).

- (16) [...] *ng'amuwadde olukusa oba talumuwadde.*
 nga a-mu-wadde olukusa oba ti-a-lu-mu-wadde
 when 1SBJ-1OBJ-give.PFV permission(11) or NEG-1SBJ-11OBJ-1OBJ-give.PFV
 '...whether he has given him a permission, or he has not given it to him.'
 [written]
- (17) a. *Omuwala yeewa ekirabo.*
 omuwala a-a-ee-w-a ekirabo
 girl(1) 1SBJ-PST-REFL-give-FV present(7)
 'The girl gave herself a present.' [elicited]

- b. *Omuwala yakyewa.*
 omuwala a-a-ki-ee-w-a
 girl(1) 1SBJ-PST-7OBJ-REFL-give-FV
 'The girl gave it to herself.' [elicited]

Luganda has a productive applicative construction formed by the suffix *-ir* and its variants. One of its functions is to introduce a beneficiary of an action expressed by the verb into the clause, as is illustrated twice in (18). Pronominal beneficiaries are then expressed by the regular object prefixes on the verb, as e.g. class 2 object prefix *ba-* on the last verb in (18).

- (18) *Nga mugogola enzizi, okuzimbira abakadde amayumba*
 nga mu-gogol-a enzizi oku-zimb-ir-a abakadde amayumba
 when 2PL.SBJ-clean-FV wells(10) INF-build-APPL-FV elderly(2) houses(6)
n' okubalimirako.
 ne oku-ba-lim-ir-a=ko
 and INF-2OBJ-dig-APPL-FV=PART
 'You would clean the wells, constructing a house for the elderly and
 digging for them a bit.' [written]

When the applied object is coreferential with the subject, the regular reflexive prefix replaces the object prefix to encode the beneficiary, as in the autobenefactive construction in (19).

- (19) a. *Yeegulira ekitabo.*
 a-a-ee-gul-ir-a ekitabo
 1SBJ-PST-REFL-buy-APPL-FV book(7)
 'She bought a book for herself.' [elicited]
- b. *Omulenzi yeefumbira ekyeggulo.*
 omulenzi a-a-ee-fumb-ir-a ekyeggulo.
 boy(1) 1SBJ-PST-REFL-cook-APPL-FV dinner(7)
 'The boy cooked himself dinner.' [elicited]
- c. *Beezimbira ennyumba.*
 ba-a-ee-zimb-ir-a ennyumba.
 2SBJ-PST-REFL-build-APPL-FV houses(10)
 'They built themselves houses.' [elicited]

- d. *Bampa ekirala kya kuzannya nga*
ba-m-p-a eki-lala kya ku-zanny-a nga
2SBJ-1SG.OBJ-give-FV 7-other 7.REL INF-act-FV as
neekwanira omulenzi.
n-ee-kwan-ir-a omulenzi
1SG.SBJ-REFL-seduce-APPL-FV boy(1)
'I was given another role of seducing a boy for myself? [written]

4.2 Coreference between non-subject arguments

No dedicated means exist in Luganda to express the coreference between two non-subject participants of the same clause. Regular possessive pronouns are used both in cases of the coreference of the possessor with one of the referents in the clause but also in case when the possessor is not mentioned in the clause at all, as the various readings in (20) indicate.

- (20) *John yalaga Mary ekifaananyi kye.*
John a-a-lag-a Mary ekifaananyi ki-e
John(1) 1SBJ-PST-show-FV Mary(1) photo(7) 7-1POSS
'John_i showed Mary_j a photo of himself_i/herself_j/him_k/her_l.' [elicited]

Attempts to obtain other cases of coreference between two non-subject participants following the questionnaire (Janic & Haspelmath 2023 [this volume]) resulted in constructions with a relative clause, as in (21a), and are ambiguous with 3rd person referents, as the various readings of (21b) suggest.

- (21) a. *Yatubuulira ebitukwatako.*
a-a-tu-buulir-a e-bi-tu-kwat-a=ko
1SBJ-PST-1PL.OBJ-tell-FV REL-8SBJ-1PL.OBJ-concern-FV=17.LOC
'She told us about ourselves.' [elicited]
- b. *Yagogera ne John*
a-a-gog-er-a ne John
1SBJ-PST-speak-APPL-FV COM John(1)
ebimukwatako.
e-bi-mu-kwat-a=ko
REL-8SBJ-1OBJ-concern-FV=17.LOC
'He_i spoke with John_j about himself_i/j/him_k/her_l.' [elicited]

5 Contrast between exact and inclusive coreference

In this section we briefly outline the structural difference between constructions used for exact coreference and constructions employed for inclusive coreference. The exact coreference between the agent and the patient arguments is expressed by the use of the regular reflexive prefix *ee-*, as in many examples above, as well as in (22). In case of inclusive coreference, the verb also carries the reflexive prefix *ee-*. The patient argument coreferential with the agent can be optionally expressed overtly with a personal pronoun followed by the self-intensifier particle *kennyini* (see below). The non-coreferential patient is expressed by a prepositional phrase with the preposition *ne* ‘with’. Furthermore, the adverb *wamu* ‘together’ can precede the prepositional phrase, compare (22a–22b).

- (22) a. *YEEKOLOKOTA.*
 a-a-kolokot-a
 1SBJ-PST-critisize-FV
 ‘He criticized himself.’ [elicited]
- b. *YEEKOLOKOTA (ye kennyini) (wamu) n' abalala.*
 a-a-kolokot-a ye kennyini wamu ne abalala
 1SBJ-PST-critisize-FV 1 self together with others(2)
 ‘He criticized himself and the others.’ [elicited]

The self-intensifier particle *kennyini* used in (22b) or its agreeing forms (“emphatic pronoun” in Murphy 1972: 178, 439)¹ is otherwise used to emphasize the exclusive participation of the noun phrase it follows, as e.g. *omulwanyi kennyini* ‘the fighter himself’ in (23a) or *ffe kennyini* ‘we ourselves’ in (23b).

- (23) a. *NAYE OMULWANYI KENNYINI YE YASABYE nti*
 naye omulwanyi kennyini ye a-a-sabye nti
 but fighter(1) self 1 1SBJ-PST-ask.PFV QUOT
 *tasobola*musajja.
 ti-a-sobol-a *musajja*
 NEG-1SBJ-cope_with-FV man(1)
 ‘But it was the fighter himself who said that he can't defeat the man.’
 [written]

¹What conditions the use of agreeing vs. non-agreeing forms is a topic for further investigations.

- b. *Eky' ennaku mu ffe kennyini*
eky' ennaku mu ffe kennyini
7.REL sadness(9) 18.LOC 1PL self(2)
abaakukusanga emmwaanyi,
a-ba-a-ku-kus-a-nga emmwaanyi
REL-2SBJ-PST-PROG-smuggle-FV-HAB coffee_berries(10)
mwabeerangamu bambega ba gavumenti.
mu-a-beer-a-nga=mu bambega ba gavumenti
18SBJ-PST-be.APPL-FV-HAB=18.LOC spies(2) 2.GEN government(9)
'What is sad is that among us ourselves, the ones who smuggled
coffee, there also used to be government spies.' [written]

6 Long-distance coreference

No dedicated means are used to express coreference across clauses, compare (24a), where the agents of the two clauses have disjoint reference, with (24b), where the agents of the two clauses are coreferential.

- (24) a. *Agambye nti batandikira Ggulu mu Septembe.*
a-gambye nti ba-tandik-ir-a Ggulu mu September
1SBJ-say.PFV QUOT 2SBJ-start-APPL-FV Ggulu(9) 18.LOC September(9)
'He said that they start from Gulu in September.' [written]
- b. *Ababaka baagambye nti bateekateeka*
ababaka ba-a-gambye nti ba-teekateek-a
representatives(2) 2SBJ-PST-say.PFV QUOT 2SBJ-arrange-FV
okusisinkana Pulezidenti Museveni.
oku-sisinkan-a Pulezidenti Museveni
INF-meet-FV president(1) Museveni(1)
'The representatives said that they are organizing to meet President
Museveni.' [written]

7 Specialized reflexive form in other functions

This section focuses on two functions of the specialized reflexive prefix *ee-*. We will first outline its use to express the reciprocal meaning (§7.1). We then briefly outline the impressive set of fossilized reflexives in Luganda (§7.2).

7.1 Reflexive-reciprocal polysemy

Apart from the functions outline above, as in many other Bantu languages, the Luganda reflexive prefix is polysemous and can be used to express the reciprocal meaning (cf. the detailed study by Dom et al. 2017 of the polysemy of the Bantu reflexive marker, as well as other markers involved in the semantic domain of the middle; see also Polak 1983 and Marlo 2015b). Luganda has two dedicated reciprocal suffixes, viz. *-an* (called “associative” in the Bantu inventory of extensions, see Schadeberg & Bostoen 2019: 173) and *-agan*,² both illustrated in (25). Of the two markers, *-agan* is more productive, though the exact conditions of the distribution of the two markers is a topic for future research (see also McPherson 2008: 44–45).

- (25) *Ffe mu kkanisa bwe tuba tugatta abafumbo*
 ffe mu kkanisa bwe tu-ba tu-gatt-a abafumbo
 we 18.LOC church(9) when 1PL.SBJ-AUX 1PL.SBJ-join-FV married_couple(2)
 tubagamba baagalananenga,
 tu-ba-gamb-a ba-yagal-an-e-nга
 1PL.SBJ-2OBJ-say-FV 2SBJ-love-RECP-SBJV-HAB
 bakuumagananga.
 ba-kuum-agan-e-nга
 2SBJ-protect-RECP-SBJV-HAB
 ‘As for us, when in church we are joining married couples, we tell them
 to love each other, to protect each other.’ [written]

In addition to the dedicated reciprocal markers, the reflexive prefix *ee-* is occasionally used to render the reciprocal meaning, as in (26).

- (26) a. *[B]atandise okwebba.*
 ba-tandise oku-ee-bb-a
 2SBJ-start.PFV INF-REFL-steal-FV
 ‘(Some Ugandans in South Africa have no job so) they started stealing
 from each other.’ [written]
- b. *Twewalana.*
 tu-ee-walan-a
 1PL.SBJ-REFL-hate-FV
 ‘We hate each other/ourselves.’ [elicited]

²This is a historically complex suffix made up of the repetitive **-ag/-ang* and associative **-an* (Schadeberg & Bostoen 2019: 173, see also Dom et al. 2017 on the origin of the reciprocal suffix *-angan* in Cilubà). With monosyllabic roots and roots in /g/ the suffix is realized as *-ayyan*, see Ashton et al. (1954: 356).

In some cases, the reflexive is used in combination with the fossilized reciprocal stems, as in (27) (see also Murphy 1972: 122).³ The functions and distribution of this construction remains a topic for further research.

- (27) *Bejjukanya.*
ba-ee-jjukany-a
2SBJ-REFL-remind.RECP.CAUS-FV
'They remind each other.'

7.2 Lexicalized reflexive verbs

The discussion in §2–§6 focused on the reflexive construction proper, i.e. on a grammatical construction with a special form (the reflexivizer *ee-*) employed when two participants of a clause are coreferential (as defined in Haspelmath 2023 [this volume]), as well as on the use of *ee-* to express the reciprocal meaning (§7.1). However, when one considers the distribution of the reflexive prefix *ee-* in the corpus, these two constructions do not account for the most frequent types of constructions with the reflexive prefix *ee-*. What are then these other uses of the reflexive prefix *ee-*?

Geniušienė (1987: 31) makes a distinction between reversible reflexive verbs, which are usually in the focus of studies of reflexive vs. the less studied class of non-reversible reflexive verbs.⁴ The following criteria of reversibility are suggested by Geniušienė (1987: 145–148) to distinguish between the two: (1) morphological reversibility, i.e. a situation when a derived unit is formally related to a base word, morphological non-reversibles are traditionally known as reflexiva tantum; (2) syntactic reversibility, viz. a change of reversible reflexive properties according to one of the regular patterns; (3) lexical reversibility, viz. the identity of lexical distribution relative to the corresponding syntactic positions in a non-reflexive construction and related reflexive construction; (4) semantic reversibility, viz. a regular, standard change of the meaning of a reflexive, thus, semantic non-reversible reflexive verbs have the meaning which is related to that of the base non-reflexive way in some idiosyncratic way. We will first consider reflexiva tantum, and then we will proceed with what Goto & Say (2009) call “non-reversible reflexive verbs proper”, these are the verbs that are non-reversible according to one or often several of the criteria (2) to (4).

³ McPherson (2008: 46) reports that one of her consultants used the reflexive prefix *ee-* and the reciprocal suffix *-agan* productively with the same verbs. Such examples are found unacceptable by the speakers we consulted and we did not find a single attestation of such a combination in our corpus.

⁴ These are originally Nedjalkov's (1997: 10–15) terms.

Reflexiva tantum and semantic non-reversible reflexive verbs proper are widespread in Bantu languages (see Marlo 2015b for examples from a range of Bantu languages). Polak (1983) notes that this widespread pattern of reflexive lexicalization and fossilization may have already existed in Proto-Bantu. Ashton et al. (1954: 132–133) in their grammar of Luganda list a small number of non-reversible reflexive verbs of various types, whereas a quick skim through (Murphy 1972) yields hundreds of candidates.⁵

Luganda reflexive tantum verbs include e.g. the intransitive *eedubika* ‘get stuck in the mud; be immersed’, and *eegoota* ‘walk with a stiff, erect or proud gait’, as well as transitive *eekeka* ‘suspect, beware of’, *eebagala* ‘mount, ride (an animal)’, and *eesigama* ‘lean on, rely on’.

Non-reversible reflexives have idiosyncratic relations to the corresponding non-reflexive verbs. An example for a Luganda semantic non-reversible reflexive verb is given in (28). The reflexive tantum verb *eesiga* ‘trust, rely on’ has a formally non-reflexive counterpart *siga* ‘sow, plant’.

- (28) *Basobola okukwesiga okukuwola?*
 ba-sobol-a oku-ku-eesig-a oku-ku-wol-a
 2SBJ-can-FV INF-2SG.OBJ-trust(REFL)-FV INF-2SG.OBJ-lend-FV
 ‘Can they trust you and lend you (money)?’ [written]

Some non-reversible reflexives are semantically nearly identical with their non-reflexive counterparts and thus do not follow the standard change of the meaning of a reflexive, as e.g. *gaana* (29a) and *eegana* (29b): they both mean ‘reject, refuse, deny’ and in one of their senses entail an abstract patient (an idea, a proposal, a statement).

- (29) a. *Kino baakigaana.*
 ki-no ba-a-ki-gaan-a
 7-PROX 2SBJ-PST-7OBJ-reject-FV
 ‘They rejected it (the divorce proposal).’ [written]
- b. *kyokka China yo ebyegaana.*
 kyokka China yo e-bi-eegaan-a
 but China(9) 9.MED 9SBJ-8OBJ-deny(REFL)-FV
 ‘(...) but China denied them (the reports).’ [written]

Other verbs are non-reversible with respect to several criteria at once. For example, the reflexive verb *eetegereza* ‘comprehend, grasp, analyze, observe, recognize, make out’ derives from *tegereza* ‘listen to, pay attention to’. Apart from the

⁵Murphy (1972) also lists frequent non-lexicalized reflexives.

semantic non-reversibility, this, as well as many other Luganda reflexive verbs, are syntactically non-reversible, as both *tegereza* and its morphologically reflexive counterpart *eetegereza* are transitive, as the object prefix *mu-* [1OBJ] in (30b) indicates.

- (30) a. *Agambye nti agenda kusooka kwetegereza*
 a-gambye nti a-gend-a ku-sook-a ku-eetegerez-a
 1SBJ-say.PFV QUOT 1SBJ-AUX-FV INF-do_first-FV INF-revise(REFL)-FV
 tteeka.
 tteeka
 bill(5)
- ‘He has said that he is going to revise the bill first (before signing it).’
 [written]
- b. *Oluvannyuma lw' okumwetegereza*
 olvannyuma lwa oku-mu-eetegerez-a
 after 11.GEN INF-1OBJ-observe(REFL)-FV
 namutuukirira.
 n-a-mu-tuukirir-a
 1SG.SBJ-PST-1OBJ-approach-FV
- ‘After observing her, I approached her (and made a marriage proposal).’ [written]

Another example of non-reversibility with respect to several criteria is provided in (31b). The non-reflexive ditransitive verb *buuza* ‘ask’ takes two arguments, viz. the person being asked and the question, as in (31a). Its reflexive counterpart *eebuuza* means ‘ask oneself, wonder’ but also ‘inquire, consult’. In this second usage, in addition to mild semantic non-reversibility, we also observe a change of valency properties, as another participant – the one enquired from – can be added to the clause, though the argument role is in principle already occupied by the reflexive prefix.

- (31) a. *Baamubuuzziza lwaki tayagala kusooka*
 ba-a-mu-buuzziza lwaki ti-a-yagal-a ku-sook-a
 2SBJ-PST-1OBJ-ask.PFV why NEG-1SBJ-want-FV INF-do_first-FV
 kugattibwa.
 ku-gattibw-a
 INF-marry-FV
- ‘They asked him why he does not want to do the wedding first.’
 [written]

- b. *Mukyala wange takyampuliriza era buli*
mukyala wa-nge ti-a-kya-n-wuliriz-a era buli
 wife(1) 1-1SG.POSS NEG-1SBJ-PERS-1SG.OBJ-listen_to-FV and every
kimu ky' akola yeebuuza ku mikwano
 kimu kye a-kol-a a-eebuuz-a ku mikwano
 thing(1) 7.REL 1SBJ-do-FV 1SBJ-consult(REFL)-FV 17.LOC friends(4)
gye.
gye
 4.1POSS

'My wife no longer listens to me and she first consults her friends on whatever she does.' [written]

8 Conclusions

This chapter addressed some questions regarding reflexive constructions in the Bantu language Luganda. It was shown that the prefix *ee-* is used as a general reflexivizer, and that it does not show morphosyntactic agreement with person-number or noun class features of the subject. It is used productively to express coreference between the subject and the patient object in transitive verbs, and there is no difference between introverted or extroverted verbs. Although Luganda has two dedicated reciprocal suffixes, *ee-* can also be used to express reciprocal meaning, which is not uncommon for Bantu languages. The Luganda reflexivizer cannot be used to render coreference between the subject and a possessor, nor between the subject and a spatial referent, and ambiguity has to be resolved by context. This is also true for the coreference between two non-subject arguments within the same clause, for which there is no dedicated marker in Luganda. Despite its productivity, reflexive constructions proper do not account for the most frequent usage of the prefix *ee-* in the corpus: it is noteworthy that the Luganda lexicon has quite a number of lexicalized reflexive verbs. In addition to reflexiva tantum, which are morphologically irreversible and cannot occur without the prefix, there are also non-reversible reflexives that have idiosyncratic (syntactic, lexical and/or semantic) relations to the corresponding non-reflexive verbs. The reflexivizer can also be used in combination with other verbal extensions, such as fossilized reciprocals, which remains a topic for future research.

Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

1SG, etc.	person and number (only when followed by SG or PL)	HAB	habitual
1 to 23	noun classes	MED	medial demonstrative
FV	final vowel	PART	partitive
		PERS	persistive

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Chapter 8

Reflexive constructions in Mano

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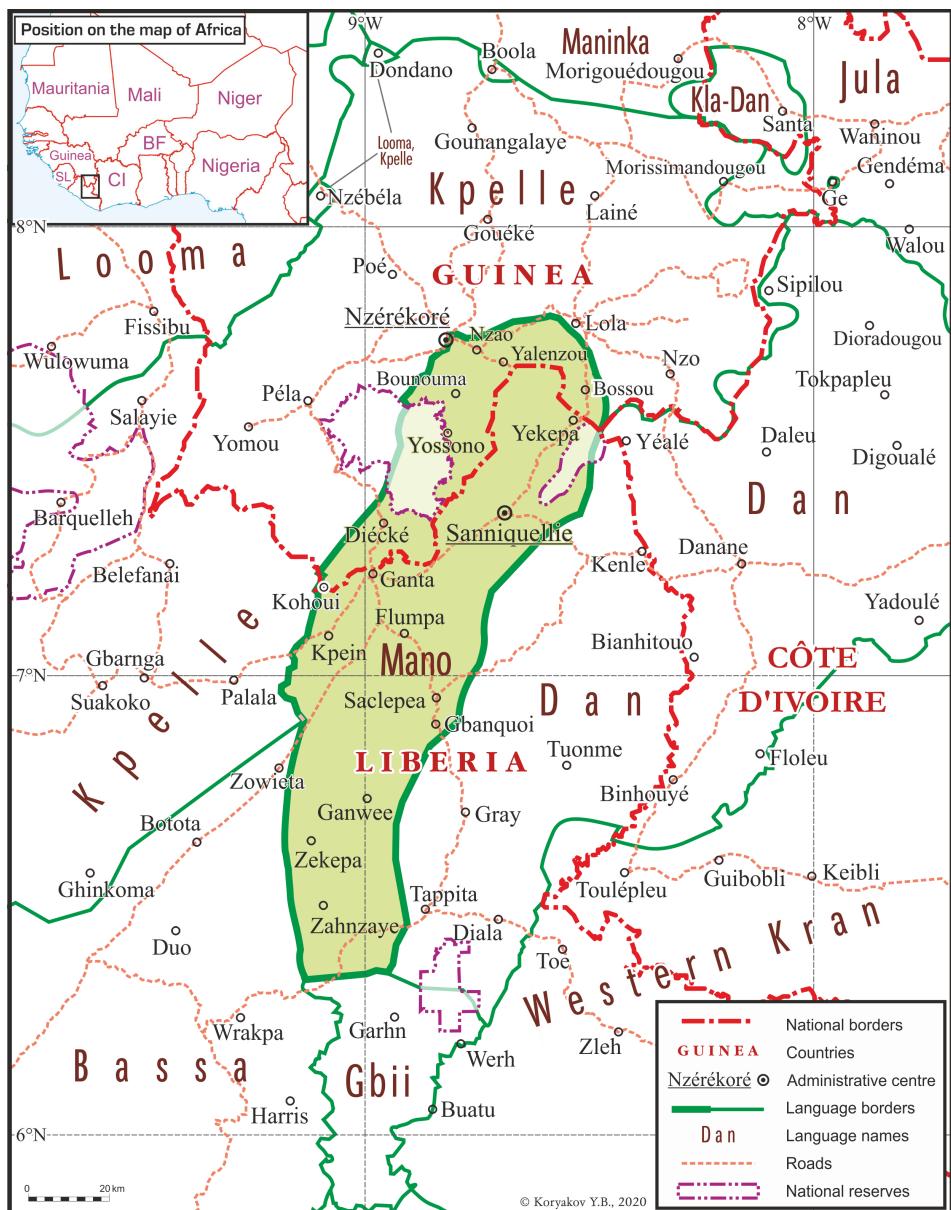
This paper focuses on reflexivity in Mano (Southern Mande). Mano has a dedicated reflexive pronoun *ē* used with [3SG] antecedents. It can be followed by the self-intensifier *dìè* to form a complex reflexive. The highlights of the reflexivity system are the following: (1) frequent non-subject orientation (direct objects, arguments of postpositions and subject's possessors can serve as antecedents) challenges the current accounts of the syntax of Mande VPs; (2) the use of the intensifier cannot be explained by the semantic class of the verb alone (introverted vs. extroverted), as *dìè* assures a broader function of reference continuity; (3) there are marginal cases of reflexives in the subject position; and (4) against typological predictions, the intensifier *dìè* can be used in middle constructions, reflexive constructions and for intensification, but not to express reciprocity.

1 Introduction

Mano (*máá*) is a Southern Mande language spoken by 305,000 people in Liberia and 85,000 in Guinea (see Figure 1). It does not have an official status in the countries where it is spoken. In Guinea, Mano is a minority language, while in Liberia, it is the fifth most spoken language. Very little literature is produced in the language, with the high-quality translation of the New Testament published in Liberia as one of the exceptions (UBS 1978).

Liberian Mano has three dialects: the Northern dialect Maalaa (*máá lāā*), spoken around Sanniquellie; the Central dialect Maazein (*máá zèj*), spoken in Ganta; and the Southern dialect Maabei (*máá bēí*), spoken in Saklepea. Guinean Mano also has three dialects: Zaan (*zàq*), the easternmost dialect spoken around the town of Bossou; Maa (*màá*), the central dialect spoken in the city of Nzérékoré and to the south of it; and Kpeinson (*kpéýsɔ̄*) spoken near Diecké. All dialects are





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Figure 1: Location of Mano and surrounding areas

mutually intelligible. This paper is based on Maa (*màá*), the central Guinean dialect. On the dialectal situation, see Khachaturyan (2018). A grammatical description of Mano can be found in Khachaturyan (2015). For a typological portrait of the language, see Khachaturyan (2020a).

In Guinea, Mano is in intense contact with Kpelle, a Southwestern Mande language spoken by 460,000 people. This results in widespread and often unreciprocated bilingualism (Mano speaking Kpelle more often than the other way round) and unidirectional transfer of certain lexical (Khachaturyan 2020b) and grammatical features (Khachaturyan 2019). Contact arguably affects the reflexivity system, as well, in the speech of bilinguals and monolinguals alike. On contact between Mano and Kpelle, see Khachaturyan & Konoshenko (2021).

This paper is largely based on my first-hand fieldwork material from Mano, elicited (el.) or naturally occurring, coming from my oral corpus (MOC). A small number of examples are taken from the Bible translation (UBS 1978), all checked with my primary language consultant for naturalness; the verses are marked correspondingly.

The discussion in this paper is organized as follows. In §2, I present the basics of Mano morphosyntax. In §3, I introduce the pronominal system, including the dedicated [3SG] reflexive pronoun. In §4, I discuss the intensifiers used in reflexive and reciprocal constructions, in particular, *diè*, which forms complex reflexive markers. §5 is dedicated to the syntax of reflexivity: the coreference domain, subject-oriented and non-subject-oriented uses, as well as reflexives in the subject position. In §6, I briefly discuss the valency changing function of reflexive markers. §7 gives a preliminary assessment of the influence of Kpelle on Mano in the domain of reflexivity. I provide a concluding discussion of the findings in §8.

2 Basics of Mano morphosyntax

2.1 Clause structure and word order

Mano has rigid word order typical of the Mande family: S Aux O V X, where Aux is an auxiliary expressing TAMP and functioning as the site of subject indexation, and X are postpositional phrases and adverbs. In (1a–1b), the 3rd person singular auxiliary *āà* belongs to the perfect series. There are in total eleven auxiliary series occurring in different TAMP contexts. The full subject noun phrase is never obligatory (1b), and reflexives can appear in clauses without an overt subject noun phrase, as is typically the case of languages with pro-drop. In copular

clauses, the word order is S Cop X, where the subject noun phrase is obligatory (see 5a below).

- (1) a. *Pèé āà kónó yà Pólāá sónó*
Pe 3SG.PRF food put Pola near
'Pe has put the food near Pola.' [el.]
- b. *āà kónó yà Pólāá sónó*
3SG.PRF food put Pola near
'(S)he has put the food near Pola.' [el.]

Some series of auxiliaries incorporate the [3SG] pronominal direct object. In some cases, the incorporating forms are distinct, as in the case of the past series (2a–2b). In some cases they coincide with non-incorporating ones, as in the case of the perfect in (1b) and (2c).

- (2) a. *ē ló*
3SG.PST go
'(S)he went.' [el.]
- b. *ā yà*
3SG.PST>3SG put
'(S)he put it.' [el.]
- c. *āà yà*
3SG.PRF>3SG put
'(S)he has put it.' [el.]

As argued in Nikitina (2009), all postpositional phrases are adjoined at the level of the clause, rather than belonging to the verb phrase (see also Nikitina 2018). This issue presents a major challenge for the analysis of reflexivity in Mano in terms of c-command, a question that I return to in §8.

2.2 Noun phrase structure

Mano has relatively limited nominal morphology, with only one productive derivational suffix (*-là*, suffix on abstract nouns) and two tonal forms: high tone forms used, in particular, when the noun is followed by a demonstrative (*gɔ́ ‘man’*, *gɔ́ wē* [man:H DEM] ‘this man’) and low tone construct forms used to mark heads of noun phrases with specific preposed dependents (*lēē ‘woman’*, *gí lèè* [stomach woman:CSTR] ‘pregnant woman’). On construct forms in African languages, see Creissels & Good (2018). There is no morphological case in the language, and

definiteness is not grammaticalized. Mano distinguishes between alienably and inalienably possessed nouns. Inalienable possession is expressed by juxtaposition of the possessor and possessee; the possessor can also be expressed by a basic pronoun (3). Alienable possession is expressed by possessive pronouns or with full possessor NP + possessive pronoun + head noun, as seen in (4).

- (3) a. *à dàā*
3SG father
'his father'
 - b. *Pèé dàā*
Pe father
'Pe's father'
- (4) a. *là ká*
3SG.POSS house
'his house'
 - b. *Pèé là ká*
Pe 3SG.POSS house
'Pe's house'

Plurality is expressed by number words: one (*vò*) for additive plural, as in *gbá vò* 'dogs', and one (*ni*) for non-additive, including associative and emphatic plural, as well as for the plural of kinship terms, as in *dàā ni* 'fathers' (father and his kin). A few nouns have irregular plural forms, such as *mí* 'person' vs *mīā* 'people' (5a). The word order in noun phrases is typically: genitival dependent – head noun – adjective – numeral – determinative. Determinatives include quantifiers, demonstratives, number words, as well as self-intensifiers, which will be discussed in detail in §4.

3 Pronouns

3.1 Personal pronouns

Mano has five series of pronominal forms used in different syntactic contexts: (1) basic pronouns, used in non-subject argument positions (direct object, argument of postposition, inalienable possessor, 5a); (2) possessive pronouns used to express alienable possessors (5b); (3) emphatic pronouns used for emphasis as well as for NP coordination (5c); (4) high-tone pronouns used in the same contexts as high-tone nouns (5d); and (5) inclusory pronouns used as heads in

inclusory constructions (5e). There are no subject pronouns, as auxiliaries are the sites of subject indexation. All pronouns distinguish between two numbers and three persons, with the exception of inclusory pronouns, which have only plural forms. Pronominal forms are given in Table 1.¹

Table 1: Personal pronouns in Mano

Pronouns	1SG	2SG	3SG	1PL	2PL	3PL
(1) basic	ŋ̄	ĩ	à/ā/á	kō	kā	ō
(2) possessive	ŋ̄	bà	là	kò	kà	wà
(3) emphatic	mā(ē)	bī(ē)	à, (à)yē, (à)yé, yō	kō(ē)	kā(ē)	ō(ē)
(4) high-tone	má	bí	(à)yé	kó	ká	ó
(5) inclusory				kò~kwà	kà	wà

- (5) a. *jèè kē mià wō ō ká*
 fetish do person.PL:CSTR COP.NEG 3PL with
 ‘They are not witches (lit.: fetish-doing-people aren’t with them).’
 [MOC]
- b. *ō wà ká dō*
 3PL.PST 3PL.POSS house build
 ‘They_i built their_{i,j} house.’ [el.]
- c. *ōē ō kēè lēé bō nē pēēlē mō*
 3PL.EMPH 3PL year 3SG.NEG go.out not.yet two on
 ‘Those (of them) who haven’t yet reached two years.’ (Matthew 2:16;
 UBS 1978)
- d. *ó ā, ō mē ē sī*
 3PL.H DEM 3PL surface 3SG.PST take
 ‘Those ones, they were cleansed.’ [el.]
- e. *gbóó-wē wà miā gbéé-wē*
 sobbing-speech:CSTR 3PL.IP person.PL cry-speech:CSTR
 ‘sobbing and people’s crying’ (Matthew 2:18; UBS 1978)

All transitive verbs are obligatorily used with a direct object, a noun phrase or a pronoun. In speech reports, a dummy pronoun is used: it is impossible to use

¹The tone of the [3sg] basic pronoun optionally assimilates to the tone of the preceding vowel.

a speech verb without a [3SG] direct object pronoun. A typical introduction of a report would be *láà gèè* '(s)he is saying it', followed by the reported discourse (see 19 and 29). Thus, [3SG] pronouns are not always referential.

3.2 Reflexive pronoun and basic pronouns in the reflexive function

Mano has a dedicated [3SG] reflexive pronoun *ē* which is used in the same positions as the basic pronouns, namely as a direct object (6), an argument of a postposition and as an inalienable possessor. It is used within the same minimal finite clause (§5.1), with a 3rd person singular antecedent (6a) and is typically not used with antecedents other than [3SG] (6d). In most contexts it is in complementary distribution with the [3SG] basic pronoun *à* (6a–6b). Some contexts, however, allow variation between the two forms (§5.2.2 and §7). In other persons and numbers, there are no dedicated reflexives and instead basic pronouns are used in the reflexive function (6c), in particular, the [3PL] pronoun *ō* which, unless it is accompanied by a self-intensifier (§4), routinely has ambiguity between coreferential and disjoint readings (6e). Thus, the paradigm of pronouns used in the contexts of coreferentiality between two arguments in the same clause consists of the basic pronouns plus the reflexive [3SG] pronoun *ē*.

- (6) a. *ē* *ē* *gii*
 3SG.PST 3SG.REFL wound
 'She wounded herself.' [el.]
- b. *ē* *à* *gii*.
 3SG.PST 3SG wound
 'She wounded him.' [el.]
- c. *kō* *kō* *gii*
 1PL.PST 1PL wound
 'We wounded ourselves.' [el.]
- d. **kō* *ē* *gii*
 1PL.PST 3SG.REFL wound
 (Intended reading: 'We wounded ourselves.') [el.]
- e. *ō* *ō* *gii*.
 3PL.PST 3PL wound
 'They wounded themselves/them.' [el.]

In some rare cases the reflexive pronoun can be used with antecedents other than [3SG]. In (7a) the antecedent of the reflexive pronoun is a [1PL] subject; cf.

ungrammatical (6d) with a similar configuration. It is the [1PL] basic pronoun *kō* that is typically used in the reflexive function with a [1PL] antecedent (6c, 7b). It can also sometimes be used without any antecedent, in a non-referential function, as in (8) where it occurs with the adjective *yīè* ‘good’ in a comitative postpositional phrase whose overall meaning is adverbial, ‘well’. The exact contexts where there is a mismatch between the person and number value of the [3SG] reflexive pronoun *ē* and the antecedent require further investigation.

- (7) a. *kóáà wálà pɛ̄ ē kíè bá*
1PL.JNT God pray:JNT 3SG.REFL RECP in
‘We pray together.’ [MOC]
 - b. *kō kō kíè bá*
1PL.EXI 1PL RECP in
‘We are together.’ [MOC]
- (8) *ō ō kò yà à wì ē yīè ká*
3PL.PST 3PL had put 3SG under 3SG.REFL good with
‘They welcomed him very well (lit.: with its goodness).’ [MOC]

4 Reflexive and reciprocal determinatives

4.1 Self-intensifier *diè* and complex reflexive markers

Basic and reflexive pronouns can be accompanied by determinatives: self-intensifier *diè* as well as reciprocal marker *kíè* (§4.3) and possessive intensifier *zì* (§5.2.1). *Diè* is an intensifier, somewhat similar to English *himself*, as in *The President himself came*. It derives from the adjective *diè* ‘true’. Consider (9).

- (9) *ke kō miìdàāmì diè là tíé wē é kú kō zò pié*
so.that 1PL Lord INT 3SG.POSS fire DEM 3SG.CONJ catch 1PL heart at
‘So that the fire of our Lord himself ignites in our hearts.’ [MOC]

Crucially, *diè* can also be used with the reflexive (10a) and with basic personal pronouns (10b–10c) to form complex (as opposed to simplex) reflexive markers. While the basic [3PL] pronoun is ambiguous between the coreferential and the disjoint readings (6e), the complex marker *ō diè* is unambiguously coreferential (10b). *Diè* can also be used with the basic 3SG pronoun (16b, 19, and 20).

- (10) a. *lē bì-pèlè ē diè mɔ̄*
3SG.EXI touch-INF 3SG.REFL INT on
‘He touches himself.’ [el.]

- b. *ō bì-pèlè ō diè mɔ̄*
 3PL.EXI touch-INF 3PL INT on
 ‘They_i touch themselves_i/*them_j.’ [el.]
- c. *kō bì-pèlè kō diè mɔ̄*
 1PL.EXI touch-INF 1PL INT on
 ‘We touch ourselves.’ [el.]

4.2 Complex vs. simplex reflexive markers

While the complex reflexive marker – pronoun + *diè* – is always possible, there are some restrictions on the use of the simple reflexive and basic personal pronouns in reflexive contexts. In the direct object position, the simplex marker is acceptable with verbs such as *zúlú* ‘wash’, *gùt* ‘hurt’, *gélé* ‘burn’, *bíj* ‘hide’, *kú* ‘warm up’, and *miimíi* ‘move’. The simplex marker is marginally accepted with verbs such as *lí* ‘make beautiful’, *mè* ‘beat’, *zàj* ‘show’, *dà* ‘drop’, *gō* ‘fight against’, and *gè* ‘see’. The simplex marker is even less acceptable with verbs such as *fòlō* ‘detach’, *gè* ‘consider’, *dòkē* ‘give’, *tènē* ‘appreciate’, and *kpàā* ‘annoy’. Corpus data partially confirms elicitation: the simplex reflexive is amply attested with the verb *zúlú* ‘wash’, while the complex one is attested with *gélé* ‘burn’, *zàj* ‘show’, *kē* ‘make, become’, *tènē* ‘raise’, *fòō* ‘inflate’ (‘swagger’ in the reflexive context, see 11), *sí* ‘take’ (‘boast’ in the reflexive context), and *sòlō bō* ‘obtain’ (‘become fully formed, developed’ in the reflexive context).

- (11) *lòkèmò ñ yé wó mīl i i diè tènē, i*
 love DEM 3SG.EMPH COP.NEG person 2SG.CONJ 2SG INT raise 2SG.CONJ
i diè fòō
 2SG INT swell
- ‘Love, it isn’t (like) man, you should raise yourself, you should swagger
 (lit.: inflate yourself).’ [MOC]

The rules of distribution between the simplex and the complex markers in the direct object position require further investigation; so far, it seems that the verbs used with simplex and complex markers cannot be neatly divided into introverted and extroverted classes, respectively, as is the case in some other languages (König & Vezzosi 2004).

In oblique argument positions expressed with postpositional phrases, the complex marker is usually preferred (16a). However, the simplex marker is also marginally possible with the verbs *nāā* ‘love’, *yé* ‘stab’, *tāā* ‘annoy’, and *gbū* ‘help’.

The simplex marker is unacceptable with the verbs *túó* ‘frighten’, *pá* ‘touch’, *nū* ‘bring’, and *lémā* ‘forget’.

In the benefactive context (12), both complex and simplex markers are acceptable.

- (12) *Péé áà ká ló ē (diè) lèē*

Pe 3SG.PRF house buy 3SG.REFL INT PP

‘Pe bought a house for himself.’ [el.]

In non-argument, locative PPs (13), simplex markers seem to be preferred, at least according to the corpus, where they occur more frequently than the complex ones.

- (13) *é ló ē mèj*

3SG.CONJ go 3SG.REFL behind

‘(So that) he returns.’ [MOC]

If both a complex reflexive and a simplex one can be used, *diè* adds intentionality (14), and emphasis (15).

- (14) a. *ē ē git̪*

3SG.PST 3SG.REFL wound

‘He wounded himself.’ [el.]

- b. *ē ē diè git̪*

3SG.PST 3SG.REFL INT wound

‘He wounded himself intentionally.’ [el.]

- (15) a. *Péé áà kónó yà ē sónó*

Pe 3SG.PRF food put 3SG.REFL near

‘Pe put food near himself.’ [el.]

- b. *Péé áà kónó yà ē diè sónó*

Pe 3SG.PRF food put 3SG.REFL INT near

‘Pe put food near himself (contrastive: there are other people around).’ [el.]

The two functions of the self-intensifier *diè*, reflexive and non-reflexive, should be considered functions of the same lexeme. In (16a), *diè* follows the reflexive pronoun *ē* forming a complex reflexive pronoun. In (16b), an utterance that directly followed (16a) in the recording, it occurs in the subject noun phrase, has an intensifying reading, and is used with a basic [3SG] pronoun *à* with the same reference as the reflexive pronoun in the preceding clause.

- (16) a. *lèfúnə̄ò èkílífē* *ē* *nū* *ē* *dìè pàà*
 light 3SG.REFL.DEM 3SG.PST come 3SG.REFL INT at
 'The light came at his own (home).' [MOC]
 b. *à dìè pàà mià* *óó* *gbāā ò* *kò* *yà à wì*
 3SG INT at person.PL:CSTR 3PL.NEG NEG 3PL arm put 3SG under
 'His own people (lit.: the people at his own) did not accept him.'
 [MOC]

4.3 Reciprocal marker *kiè*

Reciprocal constructions are formed with basic plural pronouns followed by the reciprocal determinative *kiè*, as shown in (17).

- (17) *kōò kō kiè gɛ tòò jéné dɔkézè*
 1PL.IPFV 1PL RECP see:IPFV tomorrow hour same
 'We will see each other tomorrow at the same hour.' [el.]

5 Syntax of reflexives

5.1 Coreference domain

The coreference domain of Mano reflexives is always the minimal finite clause. There cannot be antecedents for reflexive markers outside the minimal clause (with the rare exception of reflexives in the subject position, see §5.4). In (18a), the subject of the main, finite clause is the antecedent of a reflexive marker situated in the argument position of a gerund. In (18b), the reflexive marker is situated in the dependent finite clause. There is potential ambiguity: where the subjects of the two clauses are coreferential, the subject of the main clause appears as the antecedent of the reflexive marker, but if the subject of the dependent clause is distinct from the subject of the main clause, then it is apparent that it is the subject of the dependent finite clause, and not the main clause, that is the antecedent.

- (18) a. *lēè nàà bì-à ká ē dìè mò.*
 3SG.IPFV want:IPFV touch-GER with 3SG.REFL INT on
 'He_i wants to touch himself_i.' [el.]
 b. *lēè nàà é bì ē dìè mò.*
 3SG.IPFV want:IPFV 3SG.CONJ touch 3SG.REFL INT on
 'She_i wants to touch (lit.: that she_i touches) herself_i./She_i wants that
 he_j touches himself_j/*her_j.' [el.]

To express coreference between the subject of the main clause and a non-subject argument in the finite dependent clause, the basic pronoun *à* has to be employed. However, the intensifier *diè* is often added in such cases to mark that the antecedent is to be found in the immediate discourse context; it may be the subject of the main clause (19) or some other prominent referent (20).

- (19) *Yéí à gèē Kòjó lèē é à diè gè*
 Yei 3SG.PST>3SG say Ko PP 3SG.CONJ 3SG INT see
 ‘Yei_i said to Ko_j (so that) she_j looks at her_i/him_k/*herself_j.’ [el.]
- (20) *kē-ŋwɔ́-yɔ́ɔ séj lí mī à kē ē à kē-ŋwɔ́-yɔ́ɔ séj lí mī à kē-ŋwɔ́-yɔ́ɔ*
 do:problem:CSTR-bad every ATT person 3SG.SBJV>3SG do:IPFV BKGR 3SG
 tíé lèé à diè kú
 fire 3SG.NEG 3SG INT catch
 ‘Any sin_i that a person commits_j, it_i does not hurt him_j (lit.: its_i fire does not catch him_j).’ (1 Corinthians 6:18; UBS 1978)

Unlike many African languages, including some very closely related, such as Dan (Vydrin 2017), Mano does not have logophoric pronouns.

5.2 Subject orientation

5.2.1 Possessive position

The previous sections amply demonstrated the autopathic and oblique constructions with reflexive markers where the antecedent is the subject. Similarly, the reflexive pronoun can be used in the inalienable possessor position and be coreferential with the subject. It can occur within the direct object NP (22) as well as within the NP occupying the role of the argument of a postposition (21).

- (21) *máriá lē wéé-pèlè è yɔ́ɔ ŋwéjì*
 Maria 3SG.EXI speak-INF 3SG.REFL in.law about
 ‘Maria is speaking about her brother-in-law.’ [el.]

Typical grooming contexts (shaving, combing, brushing one’s teeth) are expressed with reflexive markers in the inalienable possessor position, as in (22).

- (22) *lē è sɔ́ɔ pélé-pèlè*
 3SG.EXI 3SG.REFL teeth wash-INF
 ‘She is brushing her teeth.’ [el.]

When the possessor coreferential with the subject is alienable, there are several strategies available. First, a possessive pronoun can be used, (23). In the 3rd person, it is potentially ambiguous between a coreferential and a disjoint reading.

- (23) *ē là pōj sí*
3SG.PST 3SG.POSS thing.PL take

‘(The spider) collected its belongings.’ Potential additional reading:
‘somebody else’s belongings’ [MOC]

Another option is to use a basic or, in 3SG, reflexive pronoun and the self-intensifier *dìè*, as in (24). In such a case, the possessee optionally takes a low-tone construct form (compare with 19 where the lexical tone is used). The reading is unambiguously coreferential.

- (24) *ō ō dìè kà gɛ-pɛlɛ*
3PL.PST 3PL INT house:CSTR see-INF

‘They see their own house/*somebody else’s house.’ [el.]

The final option is to use the self-intensifier *zì*. It is typically used in possessive contexts, even without an overt possessee (25), and can also be used in reflexive possessive contexts (26–27).

- (25) *kā zì ā bɛ̯ɛ́ káá lɔ́j dɔ́*
2PL POSS.INT DEM TOO 2PL.JNT>3SG trade:CSTR do:JNT
‘Your (share), you sell it.’ [MOC]

- (26) *yé wèŋ̊ ăà ē zì kɛ néj̊nɛŋ̊ kò gín̊i*
when salt 3SG.PRF 3SG.REFL POSS.INT do:NMLZ tasty arm:CSTR lose
ă...
BKGR

‘But when the salt has lost its matter of being tasty... (lit.: its-being-tasty-manner) [how can it become tasty again?]’ (Matthew 5:13; UBS 1978)

- (27) *mīā séj̊ wáà ō zì bɛlɛ kȳ̊*
person.PL every 3PL.JNT 3PL POSS.INT string catch:JNT
‘Every person grasped his own rope.’ [MOC]

In §5.3, we will see multiple examples of non-subject orientation of reflexive markers, including in the inalienable possessor position. The possibility of non-subject orientation was not tested for reflexive possessives marked with *dìè* and *zì*.

5.2.2 Basic pronoun in the reflexive function

In the postpositional phrase, the basic pronoun *à* coreferential with the subject can occasionally be used instead of the reflexive pronoun, as demonstrated by a handful of corpus examples. In (28), the pronoun is an argument of a postposition, in (29) it is used as an inalienable possessor within the argument of postposition and in (30) it is used as an alienable possessor expressed with the self-intensifier *diè*.

- (28) *ē nū à pà*
3SG.PST come 3SG at
'He came back home (lit.: he came at him).' [MOC]

- (29) *à gbē áà gèè à lòkó lèē*
3SG son 3SG.JNT>3SG say:JNT 3SG mother PP
'Her son said it to his mother.' [MOC]

- (30) *lε tā kē-pèlè à diè bū gā-à yí*
3SG.EXI dance do-INF 3SG INT rice die-GER in
'She is dancing in her (field of) ripe (lit.: dead) rice.' [MOC]

Such examples are generally disapproved in elicitation, but nevertheless occur in corpus and in production experiments.

5.3 Non-subject orientation

5.3.1 Direct object

Apart from subject antecedents, reflexives in Mano can have non-subject antecedents: direct object, argument of postposition and subject's possessor. In all examples attested, the reflexive marker is situated in the postpositional phrase. I begin with the direct object position, illustrated by (31).

- (31) *ō néfú ā gɛ̂ ē lòóò Mélé kēlè*
3PL.PST child DEM see 3SG.REFL mother Mary hand
'They saw the child in the hands of his mother Mary.' (Matthew 2:11; UBS 1978)

In (32) the reflexive marker in the postpositional phrase has two readings: its antecedent is either the DO or the subject. Without the self-intensifier *diè* the preferred interpretation is subject-oriented.

- (32) *Péé lē Máría zòò-pèlē ē dìè lēē*
 Pe 3SG.EXI Maria show-INF 3SG.REFL INT PP
 ‘Pe is showing Maria to himself/to herself.’ [el.]

5.3.2 Postpositional phrase

The antecedent of a reflexive in a postpositional phrase can be found in another postpositional phrase, as in (33). A full NP with the same referent, *dòwálàlélàmìà nófé dò* ‘any prophet’, is in the topic position and cannot occupy the role of the syntactic antecedent.

- (33) *dòwálàlélàmìà nófé dò òó ló dō ò kò yà à wì*
 prophet each INDF 3PL.NEG go once 3PL hand put 3SG under
bèlēyà ká ē dìè pàà
 respect with 3SG.REFL INT at
 ‘Any prophet_i, they (=people) have never welcomed him_i (lit.: put their hands under him) in his own_i country (lit.: at his own).’ [MOC]

However, it seems that the basic pronoun *à* is preferred to the reflexive pronoun if the antecedent is in a PP. It is also preferably, but not obligatorily, used with a self-intensifier *dìè*, as in (34).

- (34) *Péé ē wéé Máría lēē à (dìè) ñwéñ*
 Pe 3SG.PST speak Maria PP 3SG INT about
 ‘Pe_i spoke to Maria_j about herself_j/someone else_k/*himself_i.’ [el.]

5.3.3 Subject’s possessor

Some examples are attested where the antecedent of the reflexive is the subject’s possessor. Example (35) is a resultative copular construction where the syntactic position of the subject is occupied by a nominalized form of the verb whose thematic argument occupies the syntactic position of the inalienable possessor. There are examples where the subject is a noun whose inalienable (36) and alienable (37) possessors are antecedents of the reflexive. It is not yet clear what allows such uses, but in all examples attested the antecedent was a human and a prominent discourse character.

- (35) *à wàà lē ē kèlè yí*
 3SG enter.GER COP 3SG.REFL shell in
 lit. ‘She is stuck in her shell (said about a child who does not grow fast enough).’ [MOC]

- (36) à *bèlēyà wó* à *ká ē* *dìè pàà*
 3SG respect COP.NEG 3SG with 3SG.REFL INT at
 ‘He is not respected in his own country (lit.: his_i respect isn’t in his_i own country).’ [MOC]
- (37) *là bò vò ò* *péé-pèlè* *ē* *dìè kèlè*
 3SG.POSS goat PL 3PL.EXI multiply-INF 3SG.REFL INT hand
 ‘His_i goats are breeding in his_i possession.’ [MOC]

5.4 Reflexives in the subject position

Some rare examples from my corpus, disapproved in elicitation, contain reflexives in the long-distance function, where the subject NP contains a reflexive marker without antecedent within the same clause, as in (38). In (39), the noun phrase ‘her skin’ was repeated twice, in the first case, with the reflexive pronoun, and in the second case with the basic pronoun, which is the preferred variant.

- (38) *ē dàā ē kē dōmì ká*
 3SG.REFL father 3SG.PST do chief with
 ‘His (lit.: his own) father was a chief.’ [MOC]
- (39) *ē kī bō-ō* *ē mō gbaā, à kī āà bō*
 3SG.REFL skin take.off-GER 3SG.REFL on now 3SG skin 3SG.PRF take.off
 ‘Her_i (lit.: herself’s) skin being peeled off from herself_i, her_i skin was peeled off.’ [MOC]

6 Valency-changing function

In Mano, as is typical of Mande languages, the majority of verbs are labile and can be employed in transitive and intransitive constructions with active/causative or passive/inchoative meaning, respectively, without overt marking, as shown in (40a–40b) (on passive lability in Mande, see Cobbinah & Lüpke 2009). However, to explicitly mark the inchoative nature of the action, a postpositional phrase *ē diè lèē* ‘by itself’ can be added (40c).

- (40) a. *ē bò fóló*
 3SG.PST goat detach
 ‘He released the goat.’ [el.]

- b. *bò ē fóló*
goat 3SG.PST detach
‘The goat released.’ [el.]
- c. *bò ē fóló ē diè lēē*
goat 3SG.PST detach 3SG.REFL INT PP
‘The goat released by itself.’ [el.]

In some contexts, some speakers accept the complex reflexive marker in the direct object position, still in the valency-changing, rather than autopathic function. The context where such a construction sounded the most natural was a famous West-African cartoon about the child warrior Kirikou, who was born by himself.² Consider (41).

- (41) *Kirikú ē ē diè yē*
Kirikou 3SG.PST 3SG.REFL INT give.birth
‘Kirikou was born by himself’ (in the French original: ‘Kirikou s'est enfanté tout seul, lui-même’) [el.]

7 Influence of Kpelle in the reflexive domain

As mentioned above, Mano is in intense contact with Kpelle, a Southwestern Mande language. In contrast to Mano, Kpelle lacks a dedicated reflexive pronoun and employs either basic pronominal prefixes for the expression of reflexivity (in the 3SG, the prefix is expressed by consonant alternation and tonal change), or a combination of a prefix with a self-intensifier. Compare the use of the reflexive (42) and basic (43) pronouns in Mano with the use of the basic prefix in Kpelle (44).

- (42) *ē ē zúlú*
3SG.PST 3SG.REFL wash
‘He washed himself.’ [el.] (Mano)
- (43) *ē à zúlú*
3SG.PST 3SG wash
‘ He_i washed him_j .’ [el.] (Mano)

²<https://www.youtube.com/watch?v=yg8GcN0rBLA>

- (44) àá ȝwàa
3SG.RES 3SG\wash
'He_i washed him_j/himself_i.' [el.] (Kpelle)

As a result of contact with Kpelle, some Mano-Kpelle bilinguals employ the Mano basic pronoun in their Mano speech even in the contexts where such use is normally disallowed, namely, in the direct object position. Such use is especially common in the speech of young bilingual children and of L2 speakers of Mano. The example (45) was obtained from a 19-year-old speaker whose father is Mano and whose mother is Kpelle but who grew up in the Kpelle-speaking village of her maternal grandparents; in addition to a different pattern in the use of reflexives, her speech shows interference in the use of tones, which is why they are not marked.

- (45) nefu lε a die gɛ-pele gaazu yi
child 3SG.EXI 3SG INT see-INF mirror in
'The child is seeing her (meaning: herself) in the mirror.' [el.]

It was mentioned in §5.2.2 that the basic pronoun is sometimes used in the reflexive function in the speech of (quasi-)monolinguals. The examples given above (28–30) concerned the position within the postpositional phrase. Another context is the inclusory construction, which is the main means for the expression of nominal coordination. In this construction, the inclusory pronoun expresses the entire set of coordinated participants, or the superset, and is followed by a noun phrase expressing a subset of participants (46). In this construction, bilinguals and monolinguals alike employ both basic and reflexive pronouns. (Inclusory constructions in Mande languages in typological and diachronic perspective are described in Khachaturyan 2019.) Note also that it is a syntactically unusual position where the antecedent is not a subject and is not overtly expressed: the antecedent is included in the referent of the inclusory pronoun.

- (46) wà ē / à lòkóò
3PL.IP 3SG.REFL 3SG mother
'he_i and his_i mother (lit: they (including) his mother)' [el.]

The use of the non-reflexive pronoun in the inclusory construction may be a direct consequence of contact and the fact that that very construction (or, more specifically, the pronoun) was borrowed into Mano from Kpelle (Khachaturyan 2019).

An interesting fact for the syntax of binding is that when the inclusory construction occurs in the non-subject position, the reflexive pronoun can only have a reading disjoint from the subject (47). To express coreference with the subject, the basic pronoun must be chosen (48). Thus, these contexts, which have been tested only in elicitation, provide an intriguing example of obligatory non-subject orientation of the reflexive pronoun and require further explanation.

- (47) *Pèé ē Máría wà ē yɔ́j gɛ*
 Pe 3SG.PST Maria 3PL.IP 3SG.REFL in.law see
 'Pe_i saw Maria_j and her_j/*his_k/*his_i brother-in-law.' [el.]
- (48) *Pèé ē Máría wà à yɔ́j gɛ*
 Pe 3SG.PST Maria 3PL.IP 3SG in.law see
 'Pe_i saw Maria_j and his_i/his_k/her_j brother-in-law.' [el.]

8 Discussion

Mano has one dedicated reflexive pronoun, *ē*, typically used with 3SG antecedents, and two self-intensifiers, *dìè* and *zi*, the latter being used only in possessive contexts. Alone, *ē* forms a simplex reflexive marker, and accompanied by *dìè* it forms a complex reflexive marker. Both simplex and complex markers are used in autopathic, oblique and possessive contexts and their use cannot be accounted for by the semantic class of the verb (introverted and extroverted). The self-intensifier *dìè* is preferred in oblique argument position (§4.2), as well as in all cases where the coreference relation extends beyond the subject-and-its-co-argument pair, such as when the antecedent is not the subject (§5.3), when the coreference domain extends beyond the minimal final clause (§5.1), or when there are some additional pragmatic factors, such as contrast (15b). The function of *dìè* is thus much more than to form a complex reflexive marker used in specific syntactic and semantic contexts: it is employed to reduce referential ambiguity and ensure reference continuity within, but also outside the co-argument domain (a somewhat similar account of logophoric marking can be found in Dimmendaal 2001).

In the direct object position, the reflexive pronoun *ē* is in complementary distribution with the basic pronoun *à*: only *ē* is allowed with subject antecedents. However, in the postpositional phrase, *à* is also frequently allowed, especially for non-subject orientation. This lack of complementarity of reflexive and non-reflexive markers in non-core domains has been attested cross-linguistically (Testelets & Toldova 1998). In addition, under the influence of Kpelle, which does not distinguish between reflexive and nonreflexive pronouns, in Mano the basic pronoun

can replace the reflexive even in the direct object position in the speech of bilinguals and in the inclusory construction borrowed from Kpelle.

One distinctive feature of the Mano reflexivity system is the possibility of non-subject orientation, especially with direct object antecedents. Table 2 summarizes the uses of reflexive and basic [3SG] pronouns *ē* and *à* with different antecedents. The rows reflect the position of the antecedent and the columns reflect the position of the pronouns.

Table 2: Subject and non-subject orientation in 3SG

DO	PP	
SBJ	REFL	REFL (preferred in el., occurs in corpus); basic (corpus)
DO	-	REFL (preferred in el., occurs in corpus); no basic pronouns in the corpus
PP	-	basic (preferred in el., no corpus examples); REFL (1 corpus example)

According to the most recent analysis, Mande languages have a reduced verb phrase structure, with only the direct object belonging to the verb phrase, while all other verbal arguments are expressed by postpositional phrases and adjoined at the level of the IP (Nikitina 2018). Although there are arguments in support of this analysis for Mano, reflexivity presents a challenge for it, at least if analyzed within the framework of binding theory which imposes the restriction of c-commanding. The reason is that direct object NPs are widely accepted as antecedents to reflexive markers in the position of arguments of postpositions, which is a direct violation of c-commanding, assuming that postpositional phrases are base-generated in the IP-adjoined position, higher than the DO. To address these binding possibilities, an obligatory movement account of PPs from the VP to the IP position has been proposed by Nikitina (2018), who at the same time highlights its shortcomings. Alternatively, if the choice of antecedent is regulated not by the principle of c-commanding, but by the scale of syntactic roles (Testelets & Toldova 1998), then the behavior of reflexive markers is much easier to explain: the antecedent is always found in the same position on the scale or higher. In addition, there is a potential case of obligatory non-subject orientation of reflexives as part of the inclusory construction, as well as the possibility of the subject's possessor to act as an antecedent for a reflexive, which require an explanation and should be addressed in future research.

One final remark concerns the use of the self-intensifier *dîè* in anticausative constructions. The prediction by König & Moyse-Faurie (2020) states that if a marker is used for middle voice (including anticausative), for coreference between the core arguments and in the self-intensifier function, which is the case for Mano, then it has to be used in the reciprocal function. Mano data clearly contradicts this prediction, since there is a dedicated reciprocal marker *kíè*.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ATT	attention drawer	H	high tone
BCKGR	backgrounding	INT	intensifier
CONJ	conjunctive	IP	inclusory pronoun
CSTR	construct form	JNT	conjoint
EMPH	emphatic	PP	postposition, postpositional phrase
EXI	existential		
GER	gerund		

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Part III

Eurasia

Chapter 9

Reflexive constructions in Abaza

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In this article we describe reflexivization constructions in Abaza (Northwest Caucasian), a polysynthetic language characterized by consistent head marking and morphological ergativity. Abaza features two dedicated reflexivization markers: (i) the prefix *čə-* used to reflexivize the absolute argument, and (ii) the lexical reflexive based on the noun *qa* ‘head’, which is able to reflexivize arguments of different types. Besides that, coreferentiality of arguments can be expressed by the ‘doubling’ of ordinary person-number prefixes, which is primarily used when an indirect object of a transitive verb is coreferential to its ergative subject. The absolute reflexive prefix also has such uses as anticausative and autocausative. A possible path of diachronic development of the Abaza system of reflexivization markers is also briefly discussed.

1 Introduction

1.1 Classification and location of Abaza; sources of data

Abaza (*abáza-bəzšá*, ISO 639-3 *abq*) belongs to the Northwest Caucasian language family, and together with the closely related Abkhaz, it forms the Abkhaz-Abaza branch of this family. The language is spoken by about 50 thousand people, mainly in the Abazinsky district of the Karach-Cherkess Republic in the Russian North Caucasus and in Turkey, see the map in Figure 1.





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Figure 1: The geographic distribution of the Northwest Caucasian languages

In Russia, Abaza enjoys the status of one of the official languages of the Karachay-Cherkess Republic and has a written standard used in press, teaching and books. Despite that, the language is mostly used in colloquial situations and rural environments and is undergoing a constant pressure from Russian. Most if not all speakers of Abaza in Russia are bilingual in Russian, and many are also fluent in Kabardian, the distantly related language of the same family with which Abaza has been in intense contact. The major dialect of Abaza is Tapanta, often considered to be the only ‘Abaza proper’ variant (see the genealogical tree of the Abkhaz-Abaza dialects in Chirikba 2003: 14).

The data in our paper mainly comes from the fieldwork conducted in the village Inzhich-Chukun (*jənž’ág'-č'kʷən*) of the Abazinsky district of the Karachay-Cherkess Republic. The data was collected in 2017–2019 during field trips organized by the National Research University – Higher School of Economics and the Russian State University for the Humanities (Moscow). Most examples are elicited, but data from a small collection of oral narratives recorded and annotated by the members of our research team as well as from published texts are also used. Published descriptions of Abaza include the grammars by Genko (1955) and Tabulova (1976) (in Russian), a short sketch by Lomtatidze & Klychev (1989)

and a generative account of certain aspects of morphosyntax by O’Herin (2002) (in English). The questionnaire by Janic & Haspelmath (2023 [this volume]) has served us as guidance for the structuring and analysis of the data.

Our chapter is structured as follows. In the remainder of this introduction we provide a brief overview of the relevant grammatical features of Abaza. In §2, we describe reflexive constructions, dealing with the absolutive reflexive prefix in §2.1 and with the reflexive pronoun derived from the noun ‘head’ in §2.2; §2.3 discusses the ways of encoding reflexivity in the domains not covered by these dedicated expressions. §3 describes the non-reflexive functions of the absolutive reflexive prefix, and §4 addresses the questions of diachrony.

1.2 Salient grammatical features

1.2.1 Clause structure and polysynthesis

Like all languages of the Northwest Caucasian family (see Arkadiev & Lander 2021), Abaza is polysynthetic and predominantly morphologically ergative. Its morphosyntax is consistently head-marking on both clausal and phrasal levels, all arguments being indexed by prefical pronominal markers on verbs, see (1),¹ possessed nouns and postpositions, see (2). Overt nominals cross-referenced by pronominal prefixes are optional and do not show any case marking, see (2–3).

- (1) *j-g'-fa-sə-rə-m-t-χ-č-*
3SG.N.ABS-NEG.EMP-CSL-1SG.IO-3PL.ERG-NEG-give(AOR)-RE-DECL
‘They did not give it back to me.’ [textual example]
- (2) *h-babuška l-pnə h-fa-n-χa-n*
1PL.IO-granny[R] 3SG.F.IO-at 1PL.ABS-CSL-LOC-remain-PST
‘We remained at our granny’s.’ [textual example]
- (3) *phʷəs-ki l-sabəj_i dʒ-fa-l_i-q-aštələ-n*
woman-INDF 3SG.F.IO-child 3SG.H.ABS-CSL-3SG.F.IO-LOC-forget-PST.DECL
‘A woman forgot about her child.’ [textual example]

Basic word order tends to be head-final, but this is not strictly so for clauses. In addition to person-number-gender prefixes, verbs are inflected for tense, aspect, mood and finiteness and besides that can include affixes expressing negation,

¹Abaza examples are given in the Caucasological transcription rather than in IPA (see Arkadiev & Lander 2021: 372–376). The most important divergences from IPA are as follows: ejective consonants are marked by a dot below or above the symbol; palatalization is marked by an apostrophe; *c* = [ts], *č* = [tʃ], *s* = [ʃ], *z* = [dz], *ž* = [dʒ], *š* = [ç], *ž* = [z], *č* = [tç].

causative, various applicatives, as well as spatial, aspectual, modal and evaluative meanings. Verbal forms heading main and subordinate clauses are in most cases formally distinct, with overt affixes expressing both the independent status of predication and various types of subordination (relativization, nominalization, different types of conversbs). The general verbal template is given in Table 1.

Table 1: Verbal template

	-12	absolutive
	-11	subordinators, negation
preverbs	-10	repetitive
	-9	potential
	-8	applicatives
	-7	directional preverbs
	-6	locative preverbs
	-5	indirect object
	-4	ergative
	-3	negation
stem	-2	causative
	-1	sociative
	0	root
	+1	directional suffixes
	+2	event operators
	+3	plural
endings	+4	aspect
	+5	negation
	+6	tense, mood
	+7	subordinators, force

Abaza shows ‘omnipredicativity’ (Launey 2004), whereby almost any content word, including nouns and adjectives as well as their combinations, can function as a predicate without a copula and be inserted into the regular verbal morphology, cf. example (4).

- (4) *sara s-an d-adəg'a-b*
 1SG 1SG.IO-mother 3SG.H.ABS-Circassian-NPST.DECL
 ‘My mother is Circassian.’ [textual example]

1.2.2 Noun phrases

Noun phrases in Abaza minimally contain a noun, which can be inflected for number, definiteness, indefiniteness, possession and oblique cases and take modifiers such as demonstrative, possessor, simple or complex numeral, adjectives, other nouns and relative clauses. With such modifiers as adjectives, non-referential nouns and simple numerals, the head noun forms the so-called nominal complex – a tightly integrated word-like entity with rigid internal order, which is inflected and modified as a whole, see (5). Other modifiers do not form part of the nominal complex; most notably, the adnominal possessor forms a full noun phrase and is obligatorily cross-referenced by a possessive (=indirect object) prefix, as in (6).

- (5) *a-[bəz̩a-dərə-f^w-cā-dəw]-k^wa*
 DEF-language-know-NAG-PLH-big-PL
 ‘the great linguists’ [textual example]
- (6) *s-an l-aš’ā*
 1SG.IO-mother 3SG.F.IO-brother
 ‘my mother’s brother’ [textual example]

As said above, noun phrases cross-referenced by person-number-gender prefixes, including verbal core arguments, do not bear any case marking and are optional. Abaza distinguishes singular and plural number and human and non-human gender, with human being further subdivided into masculine and feminine. Gender is reference-based and manifests itself almost exclusively in pronominal markers on verbs and other argument-taking expressions.

1.2.3 Independent and bound pronouns

Abaza has both independent and bound person forms, the two classes being clearly formally related. Independent pronouns are optional and, like other nominals, lack core case marking, while bound person forms distinguish the absolute and the oblique (=ergative/indirect object) series and are generally obligatory. The two types of person forms are shown in Table 2.

Independent 3rd person pronouns shown in Table 2 occur only rarely and are mainly used for emphasis; normally, demonstratives are used in this function. These are shown in Table 3.

The prefixes of the absolute series occur in the slot -12 and encode the S argument of intransitive verbs (7a) and the P argument of transitive verbs (7b),

Table 2: Independent and bound person forms

	Absolutive	Oblique	Independent
1SG	<i>s(ə)-</i>	<i>s(ə)-z-</i>	<i>sara</i>
2SGM	<i>w(ə)-</i>	<i>w(ə)-</i>	<i>wara</i>
2SGF	<i>b(ə)-</i>	<i>b(ə)-/p-</i>	<i>bara</i>
3SGM	<i>d(ə)-</i>	<i>j(ə)-</i>	<i>jara</i>
3SGF	<i>d(ə)-</i>	<i>l(ə)-</i>	<i>lara</i>
3SGN	<i>j(ə)-</i>	<i>a-/na-</i>	<i>jara</i>
1PL	<i>h(ə)-</i>	<i>h(ə)-/ʃ-</i>	<i>hara</i>
2PL	<i>ŷ(ə)-</i>	<i>ŷ(ə)-/z-</i>	<i>ŷara</i>
3PL	<i>j(ə)-</i>	<i>r(ə)-/d(ə)-</i>	<i>dara</i>

Table 3: Demonstratives

	Singular	Plural
Proximal	<i>arat</i>	<i>arat</i>
Medial	<i>anəj</i>	<i>anat</i>
Distal	<i>awəj</i>	<i>awat</i>

while the prefixes of the oblique series encode the A argument of transitive verbs in slot –4 (7b), indirect and applied objects in slots –8, –6 and –5 (7c), as well as objects of postpositions and adnominal possessors (2 and 6 above).

- (7) a. *h-bzaza-d*
1PL.ABS-live(AOR)-DECL
'We lived.' [textual example]
- b. *awaʔa hə-ça-də-r-ça-χ-nəs*
there 1PL.ABS-LOC-3PL.ERG-CAUS-put-RE-PURP
'So that they bury us there.' [textual example]
- c. *j-ʃa-hə-r-tə-n*
3SG.N.ABS-CSL-1PL.IO-3PL.ERG-give-PST
'They gave it to us.' [textual example]

Verbal pronominal prefixes are obligatorily overt with one general exception: 3rd person singular non-human and 3rd person plural prefixes of the absolutive

series, both of which take the form *j(ə)-*, are usually dropped if the predicate is immediately preceded by the corresponding full noun phrase. Contrast example (8a), where the absolutive object follows the verb furnished with an absolute prefix, with (8b), where the prefix *j-* is absent in the presence of the immediately preceding absolute NP.

- (8) a. *mhamat-g'arəj j_i-fə-a-jə-r-t-t*
 Muhamat-Girey 3SG.N.ABS-CSL-3SG.M.IO-3PL.ERG-give(AOR)-DECL
 adg'əl_i
 land
 ‘They gave land to Muhamat-Girey.’ [textual example]
- b. *z-za-ʒə-k fə-a-h-χʷfə-a-n*
 cow-one-CLN-ADNUM CSL-1PL.ERG-buy-PST.DECL
 ‘We had bought one cow.’ [textual example]

1.2.4 Verb classes, valency and applicatives

Abaza verbs can be monovalent, bivalent or polyvalent, and non-monovalent verbs can be transitive, intransitive and inverse (or ‘oblique-absolutive’). The valency classes are defined by patterns of verbal cross-reference, as shown in Table 4.

Table 4: Valency classes of verbs

	A-like argument	P-like argument	Other arguments	Examples
Transitive	ERG	ABS	(IO, APPL)	<i>dər</i> ‘know’, <i>t(a)</i> ‘give’
Intransitive	ABS	(IO, APPL)	(APPL)	<i>bzaza</i> ‘live’, <i>pšə</i> ‘look at’, <i>cqraʃa</i> ‘help’
Inverse	IO, APPL	ABS	(APPL)	<i>ma</i> ‘have’, <i>q-aʃtəl</i> ‘forget’

Examples (9a–9c) illustrate the three verb classes.

- (9) a. Transitive

sə-l-ba-t

1SG.ABS-3SG.F.ERG-see(AOR)-DECL

'She (Erg) saw me (Abs).'

- b. Intransitive

sə-l-pšə-t

1SG.ABS-3SG.F.IO-look(AOR)-DECL

'I (Abs) looked at her (IO).'

- c. Inverse

sə-l-q-aštəl-t

1SG.ABS-3SG.F.IO-LOC-forget(AOR)-DECL

'She (IO) forgot me (Abs) (lit. I got forgotten on her).'

Abaza possesses a rich system of applicative prefixes occurring in slots -8 and -6, which freely combine with verbs of all valency types and introduce indirect objects expressed by personal prefixes immediately preceding the corresponding applicative prefix (see e.g. O'Herin 2001). Despite being prone to lexicalization, most applicatives are highly productive. Below we provide examples of the benefactive (10a), malefactive (10b), comitative (10c), instrumental (10d), and estimative (10e) applicatives; the latter mostly combines with non-verbal stems and introduces the role of a person evaluating the situation, (Jacques 2022).

- (10) a. *d-sə-z-ʃa-r-g-χ-t*

3SG.H.ABS-1SG.IO-BEN-CSL-3PL.ERG-carry-RE(AOR)-DECL

'They brought him back to me.' [textual example]

- b. *j-g'ə-j-čə-ça-h-k-wa-m*

3SG.N.ABS-NEG.EMP-3SG.M.IO-MAL-LOC:under-1PL.ERG-hold-IPFV-NEG

'We do not conceal it from him.' (Tabulova 1976: 184)

- c. *buχgalter-qada-ta d-sə-čə-n-χ-əj-t*

accountant[R]-chief-ADV 3SG.H.ABS-1SG.IO-COM-LOC-work-PRS-DECL

'She works with me as a chief accountant.' [textual example]

- d. *a-čərβʷə a-zerno*

DEF-spade DEF-corn[R]

a-la-ʃ-ça-r-g-əj-t

3SG.N.IO-INS-CSL-LOC:under-3PL.ERG-carry-PRS-DECL

'They gather corn with a spade.' [textual example]

- e. *d-rə-ma-λapa-đ̥-ta* *aχč'a*
 3SG.H.ABS-3PL.IO-EST-expensive-NPST.DECL-ADV money
g'-jə-r-t-wa-m
 NEG.EMP-3SG.M.IO-3PL.ERG-give-IPFV-NEG
 ‘They consider him expensive (lit. he appears expensive to them) and
 don’t pay him.’ [textual example]

Besides that, many of the numerous locative prefixes ('preverbs') occurring in the slot -7 (see e.g. Klychev 1995) are also applicatives and introduce indirect objects, consider (11) with a preverb meaning 'behind'.

- (11) *šamič čəf^w-ta* *d-na-sə-š'ta-lə-n*
 Shamil horseman-ADV 3SG.H.ABS-TRL-1SG.IO-LOC:behind-go.in-PST.DECL
 ‘Shamil followed me on horseback.’ [textual example]

2 Reflexive constructions

There are two dedicated reflexive constructions in Abaza, one verbal (morphological) and one nominal (lexical). The verbal reflexive construction involves the prefix *čə-* occurring in the absolute slot -12 and limited to the reflexivization of the absolute argument, as illustrated in (12); it will be discussed in §2.1. The nominal reflexive construction employs the body-part noun *qa* 'head' with a possessor prefix coreferential with the A-like argument of the verb, cf. (13). The nominal reflexive can be used to reflexivize different syntactic positions, including the absolute, where it competes with the verbal reflexive prefix. It will be discussed in §2.2. Apart from this, certain types of coreference between arguments can be expressed by the use of the appropriate pronominal prefixes in two distinct slots, as seen in (14); even though this strategy is not restricted to reflexivization, it deserves attention and will be discussed in section §2.3.

- (12) *č-hə-r-pχ-əw-n*
 REFL.ABS-1PL.ERG-CAUS-warm-IPFV-PST
 ‘We were warming ourselves up.’ [textual example]
- (13) *p-qa* *b-a-pšə*
 2SG.F.IO-head 2SG.F.ABS-3SG.N.IO-look(IMP)
 ‘Look at yourself!’ (said to a woman)
- (14) *zakə-zak haq^wə šə-c-tə-ž-g-əw-š-t*
 one-one stone 2PL.IO-COM-LOC-2PL.ERG-carry-IPFV-FUT-DECL
 ‘Each of you will take along (lit. with you) a stone.’ [textual example]

2.1 Reflexive constructions with the absolutive reflexive prefix

The absolutive reflexive prefix *čə-* normally occurs in slot -12 and is used in situations when the absolutive argument is coreferential with some other argument higher in agentivity which is encoded in the usual way. The most common situation of this kind is attested with transitive verbs, where the absolutive reflexive indicates coreference of the ergative agent and the absolutive patient. For transitive verbs, the use of the absolutive reflexive *čə-* seems to be fully productive; in particular, extroverted and introverted verbs behave similarly in this respect. Example (15) shows an extroverted verb ‘injure’ and (16) shows an introverted verb ‘wash’.

- (15) a. *sə-j-χʷə-t*
1SG.ABS-3SG.M.ERG-injure(AOR)-DECL
'He injured me.'
b. *čə-j-χʷə-t*
REFL.ABS-3SG.M.ERG-injure(AOR)-DECL
'He injured himself.'
- (16) a. *jə-l-ʒə-əj-t*
3SG.N.ABS-3SG.F.ERG-wash-PRS-DECL
'She is washing it.'
b. *čə-l-ʒə-əj-t*
REFL.ABS-3SG.F.ERG-wash-PRS-DECL
'She is washing (herself).'

Importantly, the absolutive reflexive prefix does not render the verb intransitive and hence cannot be regarded as a valency-reducing device. This is evidenced not only by the presence of the ergative prefix in (15b) and (16b), but also by the formation of the imperative. Imperative forms of Abaza transitive verbs obligatorily lack the ergative prefix corresponding to the 2nd person singular actor, and this occurs in ordinary transitive (17a) and reflexive (17b) constructions alike.

- (17) a. *a-sabəj d-ʒəa*
DEF-child 3SG.H.ABS-wash(IMP)
'Wash the child!'
b. *čə-ʒəa*
REFL.ABS-wash(IMP)
'Wash yourself!'

The use of the reflexive prefix under coreference of the absolutive with a higher ranking argument is obligatory, as indicated by (18a), where the doubling of the 1st person prefix results in ungrammaticality, as opposed to (18b) with the reflexive prefix, and by (18c) showing that the use of the ordinary 3rd person human absolutive prefix is only compatible with a disjoint interpretation.

- (18) a. * *sə-z-dər-əj-t*
 1SG.ABS-1SG.ERG-know-PRS-DECL
 intended: 'I know myself.'
 b. *čə-z-dər-əj-t*
 REFL.ABS-1SG.ERG-know-PRS-DECL
 'I know myself.'
 c. *də-l-žža-t*
 3SG.H.ABS-3SG.F.ERG-wash(AOR)-DECL
 'She washed her/him/*herself.'

The absolutive reflexive prefix is also used when the antecedent is an indirect object rather than the ergative. This happens, first, in inverse constructions derived from transitive verbs by means of the potential prefix *zə-*, as in (19), and the involuntary prefix *mqa-*, as in (20). Both these prefixes induce the shift of the A-like argument from the ergative to the indirect object (cf. O'Herin 2002: 185), see the difference between the transitive construction in (19a–19b) and the inverse construction in (19c–19d).

- (19) a. *sə-j-kʷaba-t*
 1SG.ABS-3SG.M.ERG-bathe(AOR)-DECL
 'He bathed me.'
 b. *čə-j-kʷaba-t*
 REFL.ABS-3SG.M.ERG-bathe(AOR)-DECL
 'He bathed [himself].'
 c. *sə-j-zə-kʷaba-t*
 1SG.ABS-3SG.M.IO-POT-bathe(AOR)-DECL
 'He managed to bathe me (lit. I bathed to him).'
 d. *čə-j-zə-kʷaba-t*
 REFL.ABS-3SG.M.IO-POT-bathe(AOR)-DECL
 'He managed to bathe (lit. to him bathed himself).'

- (20) a. *sə-j-mqa-χʷə-t*
 1SG.ABS-3SG.M.IO-INVOL-injure(AOR)-DECL
 ‘He accidentally injured me (lit. I got injured on him).’
- b. *č-jə-mqa-χʷ-t*
 REFL.ABS-3SG.M.IO-INVOL-injure(AOR)-DECL
 ‘He accidentally injured himself (lit. on him got injured himself).’

Second, the absolutive reflexive can be coreferential with an indirect object encoding the causee (original ergative subject) in morphological causatives based on transitive verbs. In such cases two interpretations are possible, with the antecedent being either the original agent (the causee IO), as in (21c, i.) or the new agent (the ergative causer), as in (21c, ii.) and (22).

- (21) a. *jə-z-žža-t*
 3SG.N.ABS-1SG.ERG-wash(AOR)-DECL
 ‘I washed it.’
- b. *j-sə-j-rə-žža-t*
 3SG.N.ABS-1SG.IO-3SG.M.ERG-CAUS-wash(AOR)-DECL
 ‘He made me wash it.’
- c. *č-sə-j-rə-žža-t*
 REFL.ABS-1SG.IO-3SG.M.ERG-CAUS-wash(AOR)-DECL
 i. ‘He made me_i wash (myself)_i.’
 ii. ‘He_i made me wash him_i.’
- (22) *zawał a-ʒə*
 Zawal DEF-water
č-a-j-rə-qʷara-χ-t
 REFL.ABS-3SG.N.IO-3SG.M.ERG-CAUS-strangle-RE(AOR)-DECL
 ‘Zawal drowned himself (lit. he_i let the water strangle him_i).’ [textual example]

Third, the absolutive reflexive can occur in non-derived inverse verbs where its antecedent is an experiencer rather than an agent, as in (23a) and (23b).²

- (23) a. *d-s-čə-mar-p*
 3SG.H.ABS-1SG.IO-MAL-be.unpleasant-NPST.DECL
 ‘I hate him.’

²Reflexive constructions of all types can optionally include the refactive suffix -χ (on its uses in Abaza see Panova 2019) serving to reinforce the reflexive meaning. On such uses of refactive markers see Stoynova (2010).

- b. *č-s-čə-mab-χ-p̪*
 REFL.ABS-1SG.IO-MAL-be.unpleasant-RE-NPST.DECL
 'I hate myself.'

Finally, the absolutive reflexive can be used in inverse denominational predicates derived by the estimative applicative *ma-*, see (24).

- (24) a. *d-sə-ma-pš̪za-t̪*
 3SG.H.ABS-1SG.IO-EST-beautiful(AOR)-DECL
 'I considered him/her beautiful.'
- b. *č-sə-ma-pš̪za-t̪*
 REFL.ABS-1SG.IO-EST-beautiful(AOR)-DECL
 'I considered myself beautiful.'

The absolutive reflexive cannot be used in polyvalent intransitive verbs that encode their A-like argument in the absolutive slot, as shown in (25) (cf. 9b above).

- (25) * *čə-l-pš̪-əj-t̪*
 REFL.ABS-3SG.F.IO-look-PRS-DECL
 intended: 'She looked at herself'

2.2 Reflexive constructions with the reflexive pronoun

The reflexive pronoun (or rather the reflexive noun) in Abaza is based on the noun root *qa* 'head' obligatorily furnished with a possessive (indirect object) prefix with the person, number and gender features matching those of the antecedent. The reflexive pronoun itself is cross-referenced by a 3rd person non-human marker in the appropriate slot. Example (26b) shows the reflexive in the absolute position, and (27b) shows the indirect object reflexive. The corresponding examples, (26a) and (27a), feature ordinary nouns in the same syntactic positions. In (26b) the reflexive pronoun immediately precedes the verb, hence the corresponding absolute prefix is absent.

- (26) a. *sara s-an də-z-ba-t̪*
 1SG 1SG.IO-mother 3SG.H.ABS-1SG.ERG-see(AOR)-DECL
 'I saw my mother.'
- b. *sara a-fʷəga-la s-qa z-ba-χ-t̪*
 1SG DEF-mirror-INS 1SG.IO-head 1SG.ERG-see-RE(AOR)-DECL
 'I saw myself in the mirror.'

- (27) a. *j-an də-l-c-qraʃ-əj-t*
 3SG.M.IO-mother 3SG.H.ABS-3SG.F.IO-COM-help-PRS-DECL
 'He helps his mother.'
- b. *j-qa d-a-c-qraʃa-χ-əj-t*
 3SG.M.IO-head 3SG.H.ABS-3SG.N.IO-COM-help-RE-PRS-DECL
 'He helps himself.'

With a plural antecedent, the reflexive pronoun can optionally take the plural suffix *kʷa*, in which case it is cross-referenced by a plural prefix, see (28a–28b).

- (28) a. *hara h-qa j-a-zə-h-χʷʃa-t*
 1PL 1PL.IO-head 3SG.N.ABS-3SG.N.IO-BEN-1PL.ERG-buy(AOR)-DECL
 b. *hara h-qa-kʷa jə-r-zə-h-χʷʃa-t*
 1PL 1PL.IO-head-PL 3SG.N.ABS-3PL.IO-BEN-1PL.ERG-buy(AOR)-DECL
 'We bought it for ourselves.' (a=b)

The reflexive pronoun is the only reflexivization strategy available for intransitive verbs like 'look at' or 'help' in (25) and (27) above, but is used more widely. With transitive verbs, it competes with the verbal reflexive prefix, which seems to be the default option and is especially preferable in those cases when the use of the nominal reflexive may induce a body-part rather than a reflexive interpretation, as seen in (29–31).

- (29) a. *d-sə-r-ɻʷanč'-əj-t*
 3SG.H.ABS-1SG.ERG-CAUS-guilty-PRS-DECL
 'I accuse him/her.'
- b. *s-qa sə-r-ɻʷanč'-əj-t*
 1SG.F.IO-head 1SG.ERG-CAUS-guilty-PRS-DECL
 'I accuse myself'/??'I accuse my own head.'
- c. *č-sə-r-ɻʷanč'-əj-t*
 REFL.ABS-1SG.ERG-CAUS-guilty-PRS-DECL
 'I accuse myself'
- (30) a. *čə-l-ɻ̩-əj-t*
 REFL.ABS-3SG.F.ERG-wash-PRS-DECL
 'She is washing (herself).'
- b. *l-qa l-ɻ̩-əj-t*
 3SG.F.IO-head 3SG.F.ERG-wash-PRS-DECL
 'She is washing her head'/*'She is washing.'

- (31) a. *č-a-čə-s-χč’-a-t*
 REFL.ABS-3SG.N.IO-MAL-1SG.ERG-protect(AOR)-DECL
 ‘I protected myself from it.’
- b. *s-qa a-čə-s-χč’-a-t*
 1SG.IO-head 3SG.N.IO-MAL-1SG.ERG-protect(AOR)-DECL
 ‘I protected myself/my head from it.’

The nominal reflexive can also be used instead of the verbal reflexive in inverse verbs, cf. (32).

- (32) *s-qa j-sə-čə-maŋ-χ-đ*
 1SG.IO-head 3SG.N.ABS-1SG.IO-MAL-be.unpleasant-RE-NPST.DECL
 ‘I hate myself.’

The reflexive pronoun also occurs in the position of indirect or applied object with transitive verbs, where its antecedent is the ergative agent, see (33–34); as we show in the next section (§2.3), this pattern of coreference can be expressed by mere doubling of pronominal prefixes.

- (33) a. *sara bara j-b-a-s-h^w-t*
 1SG 2SG.F 3SG.N.ABS-2SG.F.IO-DAT-1SG.ERG-say(AOR)-DECL
 ‘I said it to you (woman).’
- b. *awəj l-qa j-a-l-h^w-χ-t*
 DIST 3SG.F.IO-head 3SG.N.ABS-3SG.N.IO-3SG.F.ERG-say-RE-DECL
 ‘She said it to herself.’
- (34) a. *d-b-čə-s-χč’-a-t*
 3SG.H.ABS-2SG.F.IO-MAL-1SG.ERG-protect(AOR)-DECL
 ‘I protected him from you (woman).’
- b. *s-qa d-a-čə-s-χč’-a-t*
 1SG.IO-head 3SG.H.ABS-3SG.N.IO-MAL-1SG.ERG-protect(AOR)-DECL
 ‘I protected him/her from myself.’

Finally, the nominal reflexive can also express coreference with a non-subject argument, e.g. with the absolutive P as in (35), where the nominal reflexive is an applied object.

- (35) *aslan j-qa*

Aslan 3SG.M.IO-head

d-a-čə-s-χč’-a-χ-t

3SG.H.ABS-3SG.N.IO-MAL-1SG.ERG-protect(AOR)-RE-DECL

‘I protected Aslan from himself’

The nominal reflexive can co-occur with the verbal reflexive when both the absolute and the indirect object are coreferential with the ergative participant, as in (36).

- (36) *s-qa č-a-čə-s-χč’-a-t*

1SG.IO-head REFL.ABS-3SG.N.IO-MAL-1SG.ERG-protect(AOR)-DECL

‘I protected myself from myself’

The nominal reflexive cannot be used as an intensifier, this function being expressed by (simple or reduplicated) 3rd person pronouns, see Panova (2020). This is shown in (37a), where the reduplicated 3rd person masculine pronoun *jara* functions as a self-intensifier, while the use of the reflexive noun in the same position renders the sentence infelicitous (37b).

- (37) a. *zažg’aj a-č’kʷən*

nobody DEF-boy

d-g’-p-jə-m-qə-t,

jara-jara

3SG.H.ABS-NEG.EMP-LOC-3SG.M.ERG-NEG-cut(AOR)-DECL 3SG.M~INTF

j-qa pə-j-qə-χ-t

3SG.M.IO-head LOC-3SG.M.ERG-cut(AOR)-RE-DECL

‘Nobody injured the boy, he injured himself’

- b. # ...*j-qa awəj d-p-na-qə-χ-t*

3SG.M.IO-head DIST 3SG.H.ABS-LOC-3SG.N.ERG-cut(AOR)-RE-DECL

‘...his head cut him.’

The 3rd person pronoun is also used to disambiguate the reflexive and disjoint readings in adposessive constructions, see (38a); the nominal reflexive is ungrammatical in this position (38b).

- (38) a. *dasəwzlakg’aj jara j-tʃača*

whoever.it.is 3SG.M 3SG.M.IO-family

də-r-zə-nχ-əj-t

3SG.H.ABS-3PL.IO-BEN-work-PRS-DECL

‘Everyone works for his own family.’

- b. * *dasəwzlaⱩ'əj j-qa a-tʃača*
 whoever.it.is 3SG.M.IO-head 3SG.N.IO-family
də-r-zə-nχ-əj-ʈ
 3SG.H.ABS-3PL.IO-BEN-work-PRS-DECL
 intended: ‘=a’

The nominal reflexive cannot occur in the position of the subject, i.e. as the ergative argument of transitive verbs, (39), or the absolutive argument of intransitive verbs (40).

- (39) a. *a-phʷəspaᵢ a-fʷəga a-pnə l-qaᵢ*
 DEF-girl DEF-mirror 3SG.N.IO-at 3SG.F.IO-head
l-ba-χ-əj-ʈ
 3SG.ERG-see-RE-PRS-DECL
 ‘The girl sees herself in the mirror.’ (Testelets 2017: ex. 10a)
- b. # *l-qaᵢ a-phʷəspaⱩ/*ᵢ a-fʷəga a-pnə*
 3SG.F.IO-head DEF-girl DEF-mirror 3SG.N.IO-at
d-a-ba-χ-əj-ʈ
 3SG.H.ABS-3SG.N.ERG-see-RE-PRS-DECL
 ‘#Her head again sees the girl in the mirror.’ (#a) (Testelets 2017: ex. 10b)
- (40) a. *l-qa d-a-č-š-əj-ʈ*
 3SG.F.IO-head 3SG.H.ABS-3SG.N.IO-MAL-fear-PRS-DECL
 ‘She fears herself.’
- b. * *l-qa jə-l-č-š-əj-ʈ*
 3SG.F.IO-head 3SG.N.ABS-3SG.F.IO-MAL-fear-PRS-DECL
 (only #‘Her head is afraid of her.’)

Normally the antecedent of the nominal reflexive must belong to the same clause, but some of our consultants allowed examples like (41) with the matrix subject anteceding a reflexive in a non-finite clause.

- (41) *aslanᵢ [rəwslanⱩ jᵢ/j-qa d-a-z-ʒərfʷə-rnəs]*
 Aslan Ruslan 3SG.M.IO-head 3SG.H.ABS-3SG.N.IO-BEN-listen-PURP
j-a-j-hʷ-ʈ
 3SG.M.IO-DAT-3SG.M.ERG-say(AOR)-DECL
 ‘Aslan told Ruslan to listen to himself (=Ruslan/%=Aslan).’

2.3 Domains not covered by the dedicated reflexive constructions

In addition to the dedicated verbal and nominal reflexives, coreference in Abaza can be expressed by the use of the same personal prefixes in two distinct slots, which we call ‘doubling’. In particular, this is the only strategy available for the reflexivization of the adnominal possessor or postpositional object, cf. (42–43).

- (42) *wə-nbž' ařw'-ča-kʷa z-řa-wə-m-d-ja*
 2SG.M.IO-friend-PLH-PL REL.RSN-CSL-2SG.M.ERG-NEG-lead-QN
 ‘Why didn’t you (man) bring your friends here?’ [textual example]
- (43) *j-pnə w-a-n-jə-r-pχ' a-wa*
 3SG.M.IO-at 2SG.M.ABS-3SG.N.IO-LOC-3SG.M.ERG-CAUS-spend.night-IPFV
 ‘He lets you (man) spend the night at his (place).’ [textual example]

Besides these rather expected cases, doubling of personal prefixes systematically occurs in transitive verbs as well to indicate coreference between the ergative agent and an indirect object. This happens in morphological causatives from transitive verbs (cf. Tabulova 1976: 188), see (44).

- (44) a. *lə-bəzša-g'aj h-lə-r-dər-t*
 3SG.F.IO-language-ADD 1PL.IO-3SG.F.ERG-CAUS-know(AOR)-DECL
 ‘She taught (lit. caused to know) us her language.’ [textual example]
- b. *j-řa-s-sə-r-dər-aj-t*
 3SG.N.ABS-CSL-1SG.IO-1SG.ERG-CAUS-know-PRS-DECL
 ‘I learn it (lit. I cause myself to know it).’ (Tabulova 1976: 188)

As expected, the coreferential interpretation is obligatory only with the 1st and 2nd person prefixes, while verb forms with identical 3rd person prefixes may have both coreferential and disjoint interpretations depending on the context, see (45).

- (45) a. *j-řa-j-lə-r-ba-t*
 3SG.N.ABS-CSL-3SG.M.IO-3SG.F.ERG-CAUS-see(AOR)-DECL
 ‘She showed it to him.’
- b. *j-řa-l-lə-r-ba-t*
 3SG.N.ABS-CSL-3SG.F.IO-3SG.F.ERG-CAUS-see(AOR)-DECL
 ‘She_i showed it to her_j/herself_i.’

Expression of coreference by doubling of personal prefixes is widespread with applied objects of transitive verbs. It is attested with the comitative, see (14)

above, benefactive (46), malefactive (47),³ as well as with some locative preverbs (48).

- (46) a. *jə-l-zə-w-χʷf-əj-t*
3SG.N.ABS-3SG.F.IO-BEN-2SG.M.ERG-buy-PRS-DECL
'You (man) buy it for her.'
 - b. *jə-w-zə-w-χʷf-əj-t*
3SG.N.ABS-2SG.M.IO-BEN-2SG.M.ERG-buy-PRS-DECL
'You (man) buy it for yourself.'
- (47) a. *d-a-čə-s-χč'ə-t*
3SG.H.ABS-3SG.N.IO-MAL-1SG.ERG-protect(AOR)-DECL
'I protected him/her from it.'
 - b. *d-sə-čə-s-χč'ə-t*
3SG.H.ABS-1SG.IO-MAL-1SG.ERG-protect(AOR)-DECL
'I protected him/her from myself.'
- (48) a. *j-f-a-ča-w-ç-əj-t*
3SG.N.ABS-CSL-3SG.N.IO-LOC:under-2SG.M.ERG-put-PRS-DECL
'You (man) put this under that.'
 - b. *j-fa-wə-ča-w-ç-əj-t*
3SG.N.ABS-CSL-2SG.M.IO-LOC:under-2SG.M.ERG-put-PRS-DECL
'You (man) put it under yourself.'

When the semantics allow it, it is possible to combine the doubling strategy with one of the dedicated reflexivization devices, cf. (49a) with the verbal reflexive and (49b) with the nominal reflexive; cf. also (36) above.

- (49) a. *č-s-čə-s-χč'ə-t*
REFL.ABS-1SG.IO-MAL-1SG.ERG-protect(AOR)-DECL
- b. *s-qa jə-s-čə-s-χč'ə-t*
1SG.IO-head 3SG.N.ABS-1SG.IO-MAL-1SG.ERG-protect(AOR)-DECL
'I protected myself from myself.' (a=b)

A special case of doubling of personal prefixes occurs in constructions involving relative verbal forms, i.e. relative clauses, content questions (see Arkadiev 2020) and argument focus constructions. Here a coreferential (or more precisely:

³Note that our consultants allow a broader application of this strategy than reported by O'Herin (2001: 490–491), who claims it to be disallowed with benefactive and malefactive.

covarying, i.e. semantically bound) interpretation is only available if all occurrences of the relevant personal prefix are replaced by the relative prefix *zə-* in the same slot (see a discussion in O’Herin 2002: 264–265). This happens both in verbs with indirect objects, (50a), and in adposessive constructions, (51a). If the regular personal prefix is used instead of the relative prefix in the lower position, only the disjoint interpretation is possible, cf. (50b) and (51b).

- (50) a. *awaj z-zə-r-dər-wa-z-da?*
 DIST REL.IO-REL.ERG-CAUS-know-IPFV-PST.NFIN-QH
 ‘Who learned (lit. caused oneself to know) it?’
- b. *awaj j-zə-r-dər-wa-z-da?*
 DIST 3SG.M.IO-REL.ERG-CAUS-know-IPFV-PST.NFIN-QH
 ‘Who taught him that?’/*‘Who learned it?’
- (51) a. *z-χaʒat-kʷa-la čə-zə-m-bz'a-χ-wa*
 REL.IO-mistake-PL-INS REFL.ABS-REL.ERG-NEG-educate-RE-IPFV
d-laga-p
 3SG.H.ABS-fool-NPST.DECL
 ‘The one_i who does not learn by his/her_i own errors is a fool.’
- b. # *j-χaʒat-kʷa-la čə-zə-m-bz'a-χ-wa*
 3SG.M.IO-mistake-PL-INS REFL.ABS-REL.ERG-NEG-educate-RE-IPFV
d-laga-p
 3SG.H.ABS-fool-NPST.DECL
 ‘The one_i who does not learn by his_j (someone else’s) errors is a fool.’

The distribution of the three types of expression of coreference in Abaza, including two dedicated reflexivization strategies and the doubling of personal prefixes, is shown in Table 5.

Table 5: Distribution of reflexivization strategies in Abaza

Strategy	ERG>ABS	IO>ABS	ERG>IO	ABS>IO	X>POSS
Verbal reflexive <i>čə-</i>	+	+	-	-	-
Nominal reflexive <i>qa</i>	+	+	+	+	-
Doubling of personal prefixes	-	-	+	-	+

3 Related functions of the absolute reflexive prefix

The verbal reflexive has autocausative and anticausative uses with both controlling animate and non-controlling inanimate subjects. Verbs allowing such a use of reflexive include verbs denoting caused motion, (52) caused change of posture, (53), and certain verbs of caused change of state, (54).

- (52) a. *sara č-a-ca-sə-r-pa-t*
 1SG REFL.ABS-3SG.N.IO-LOC:back-1SG.ERG-CAUS-turn(AOR)-DECL
 ‘I turned (lit. myself) back.’
- b. *a-fljuger*
 DEF-vane[R]
 \check{c} -a-ca-na-r-pa-t
 REFL.ABS-3SG.N.IO-LOC:back-3SG.N.ERG-CAUS-turn(AOR)-DECL
 ‘The weather-vane turned (lit. itself).’
- (53) a. *nana čə-na-lə-r-qʷ-t*
 granny REFL.ABS-TRL-3SG.F.ERG-CAUS-bend(AOR)-DECL
 ‘Granny bent (to get something from the floor).’
- b. *a-çla č-na-na-r-qʷ-t*
 DEF-tree REFL.ABS-TRL-3SG.N.ERG-CAUS-bend(AOR)-DECL
 ‘The tree bent.’
- (54) a. *awəj č-a-kʷ-jə-r-βʷβʷa-t*
 DIST REFL.ABS-3SG.N.IO-LOC:on-3SG.M.ERG-CAUS-straight(AOR)-DECL
 ‘He stretched (lying on a bench).’
- b. *a-napa-kʷa čə-də-r-βʷβʷa-χ-t*
 DEF-page-PL REFL.ABS-3PL.ERG-CAUS-straight-RE(AOR)-DECL
 ‘The pages became smooth again (after the book was put under a press).’

From the data we have, it may appear that most of the verbs that allow such a use of the reflexive are morphological causatives, but simplex verbs allow it as well, see (55–56).

- (55) *a-qəs̩-kʷa č-ʃa-r-tə-t*
 DEF-window-PL REFL.ABS-CSL-3PL.ERG-open(AOR)-DECL
 ‘The windows opened.’ (Tugov 1967: 362)

- (56) *č-a-d-h-klə-n* *zəmʃʷa-g'əj*
REFL.ABS-3SG.N.IO-LOC-1PL.ERG-gather-PST all-ADD
'We all gathered there.' [textual example]

A less trivial use of the reflexive prefix is attested only in combination with the morphological causative and involves the meaning of simulation or pretence, cf. (57–58).

- (57) *čə-j-rə-gʷžaža-wa-n*
REFL.ABS-3SG.M.ERG-CAUS-hurry-IPFV-PST
'He pretended to be in a hurry.'
- (58) *č-jə-r-laga-t*
REFL.ABS-3SG.M.ERG-CAUS-fool(AOR)-DECL
'He pretended to be a fool.'

4 Diachronic development

The diversity of reflexivization strategies attested in Abaza and their distribution can be explained as a result of successive cycles of grammaticalization (i.e. *layering*, Hopper 1991). The etymology of the absolutive reflexive *čə-* is unclear, but comparative data from Abkhaz (Hewitt 1979: 77–78) indicates that it goes back to a noun with a possessive prefix incorporated into the absolutive slot of the verb, as shown in (59).⁴

- (59) *l-čə-l-kʷaba-jt*
3SG.F.IO-REFL-3SG.F.ERG-bathe(AOR)-DECL
'She bathed.' (Abkhaz, Hewitt 1979: 78)

This diachronic process has reached a more advanced stage in Abaza than in Abkhaz and must have started with the absolutive arguments of highly transitive verbs, which is commonly recognized as the most natural reflexive context, see Faltz (1977: 3), Kemmer (1993: 42–52), Haspelmath (2008), Haspelmath (2019: 16–17), then extending to derived and lexical inverse predicates by analogy.

The nominal reflexive *qa* 'head' with a possessive prefix is nothing but a newer instance of the same development. The grammaticalization path from 'head' to reflexive is cross-linguistically recurrent (see e.g. Schladt 2000; Heine & Kuteva

⁴Transcription and glossing adapted.

2002: 168–169; Evseeva & Salaberri 2018⁵) and is common in the languages of the Caucasus, being attested across the Northwest Caucasian family as well as in the Kartvelian languages. The strategy with doubling of pronominal prefixes is probably a vestige of an earlier state with no dedicated reflexive marking, ousted to the periphery of the system when the specialized means of expression emerged.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ADD	additive	MAL	malefactive
ADNUM	adnumerative	N	non-human
AOR	aorist	NAG	agent nominal
CLN	non-human classifier	NFIN	non-finite
CSL	cislocative	NPST	non-past
DAT	dative applicative	PLH	human plural
DIST	distal demonstrative	POT	potential
EMP	emphatic	QH	human interrogative
EST	estimative	QN	non-human interrogative
H	human	R	Russian loan
INTF	intensification	RE	refactive
INVOL	involuntative	RSN	reason subordinator
IO	indirect object	TRL	translocative
LOC	locative applicative		

⁵It should be noted that the data on Abaza and Abkhaz adduced in these works are erratic and probably all stem from errors in the table given by (Schladt 2000: 108) without reference to sources.

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Chapter 10

Reflexivity in Kazym Khanty

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This paper discusses reflexivity strategies in the Kazym dialect of Khanty, an endangered Uralic language spoken in northwestern Siberia. Khanty is a language without dedicated reflexive pronouns (Nikolaeva 1995, 1999b); to express reflexivity Kazym Khanty speakers use personal pronouns, a doubled pronoun construction or add a particle to a personal pronoun. For a closed class of verbs in Kazym Khanty detransitivising suffixes can be employed to convey the reflexive meaning. The absence of dedicated reflexive pronouns is a typological rarity, cross-linguistically they are considered the “norm” (Heine & Miyashita 2008; Moyse-Faurie 2008). The paper presents a hypothesis about how Kazym Khanty avoids excessive anaphoric ambiguity.

1 Introduction

The present paper discusses reflexivity strategies in the Kazym dialect of Khanty, an endangered Uralic language spoken in northwestern Siberia.

Khanty is known in the literature to be a language without dedicated reflexive pronouns (Nikolaeva 1995, 1999b). That is true also for the Kazym dialect of Khanty: personal pronouns function as reflexive pronouns, as in (1).¹

¹In Khanty, the 2nd person singular possessive suffix is often used in a non-possessive function to indicate discourse salience. In such uses, the link to the possessive meaning is preserved: when translating from Khanty to Russian, native speakers often convey the meaning with a 2nd person singular pronoun. The non-possessive uses of possessive affixes in Khanty are often reminiscent of definite articles, but the correspondence is not full. Thus, their distribution and referential properties need further investigation.



- (1) *Evi-j-en λw
girl-OBL-POSS.2SG (s)he-ACC see-PST-3SG>SG
'The girl saw him/herself.'*

A terminological note is warranted before we proceed. We use the term *reflexivity* for the phenomenon where two roles in a situation are performed by the same participant. The ways a natural language encodes reflexivity are referred to as *reflexivity strategies* (e.g. reflexive pronouns, verbal reflexive affixes). We use the term *binding* for an anaphoric dependency within a sentence, especially if the antecedent is non-referential (we, however, use this term loosely and refrain from any theoretical claims as to the nature of this dependency); we reserve the term *coreference* for cross-sentential anaphoric dependencies. *Local binding* refers to an anaphoric dependency between coarguments of a verb. The term *covalueation* is used as a cover term for both *binding* and *coreference*. We also use the term *reflexive possessive construction*, if the possessor of an argument is covalued with another argument in the clause.

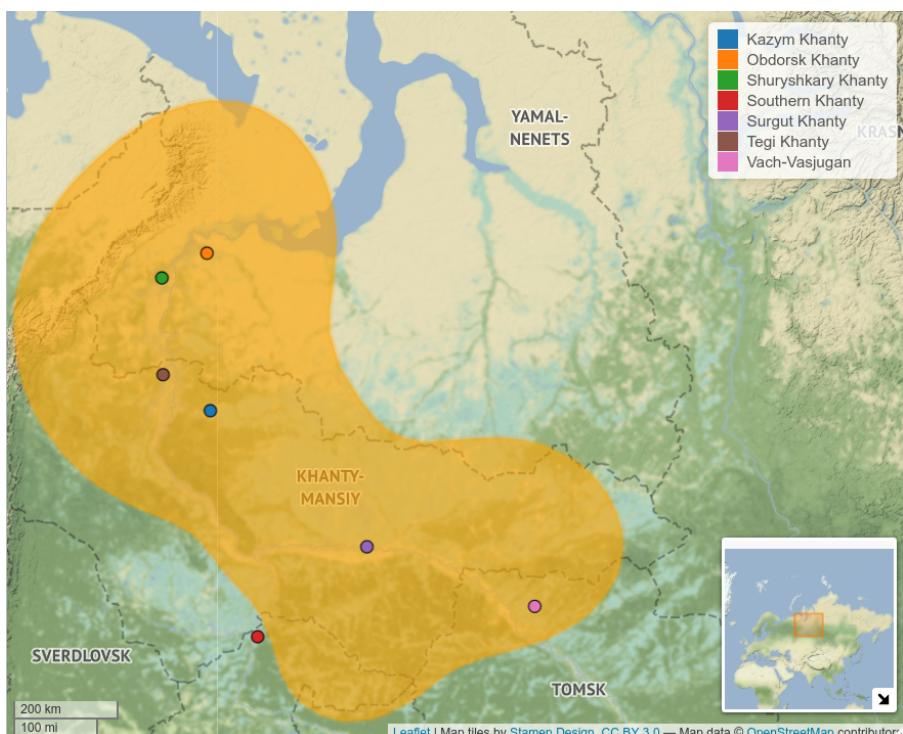
Kazym Khanty differs from the northern varieties of Khanty discussed in the literature: for the 3rd person pronoun to be locally bound, the verb is not required to bear any special kind of agreement (we will address this in detail in §3; the reverse pattern with obligatory object agreement on the verb is described for the Tegi variety in Volkova & Reuland 2014 and for the Obdorsk variety in Nikolaeva 1999b). Apart from employing personal pronouns to encode reflexivity, Kazym Khanty speakers also make use of a doubled pronoun construction or add a particle to a personal pronoun (§4). A closed class of verbs in Kazym Khanty allows detransitivising suffixes to express reflexivity (§5). §6 deals with reflexive possessive constructions which combine a personal pronoun and a possessive affix on the possessed noun. Different means of intensification are discussed in §7. The absence of dedicated reflexive pronouns is typologically unusual, cross-linguistically they are considered the 'norm' (Heine & Miyashita 2008; Moyse-Faurie 2008). We discuss how Kazym Khanty avoids excessive anaphoric ambiguity in §8. §9 concludes.

The Kazym data and generalizations provided in this paper come primarily from the elicitation sessions conducted during the HSE University team field trips to Kazym (2018–2019). These examples are given below with no reference to the source. However, in illustrating language facts of Kazym Khanty we also (where possible) resort to providing examples from texts. They come from either the Western Khanty corpus created and glossed by Egor Kashkin (WKhC) or the text corpus collected by our team during the fieldwork (KKhC).

2 Khanty: A profile

2.1 Sociolinguistics

Khanty (Ostyak) is a member of the Ob'-Ugric subgroup of the Ugric group (includes also Mansi (Vogul) and Hungarian) of the Uralic language family. It is spoken by some 9,500 people (2010 census). The ethnic population totals 28,700 people spread out over several thousand square kilometers in northwestern Siberia, Russia (Lewis et al. 2013) from the upper reaches of Pechora, in the northern Urals, to the Yugan, Vasyugan, and Vakh rivers in the Tomsk region (see Figure 1).² The majority of Khanty people live in the Khanty-Mansi and Yamalo-Nenets Autonomous Regions, smaller groups reside in the Tomsk region.



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Figure 1: A map of Khanty

²The map was generated by the lingtypology package for R. Moroz, Georgy. 2017. *lingtypology: easy mapping for Linguistic Typology* (<https://CRAN.R-project.org/package=lingtypology>). The authors wish to thank Georgy Moroz and Yuri Koryakov for their help.

Due to limited contact between groups of speakers, the Khanty have developed a dialectal continuum, the opposite ends of which diverge greatly in both grammar and lexicon and are mutually incomprehensible (Nikolaeva 1999b). The most commonly accepted classification of dialects goes back to (Steinitz 1937). They can be subdivided into three groups: i) Eastern dialects (dialects of Vakh-Vasyugan, Surgut, and Salym); ii) Southern dialects (dialects of Irtysh and Demyanka); iii) Northern dialects (dialects of Middle-Ob', Kazym, Shuryshkary, and Obdorsk). At present, the southern dialects have almost died out, the eastern dialects are highly endangered. The northern dialects are used primarily by the older generation (50+).

The variety reported in this paper is spoken in the village of Kazym in the Belyoyarsky District in the northern part of the Khanty-Mansi Autonomous Region, just to the east of the Ob' river. Another idiom we mention is the Berezovo Khanty variety spoken in the Tegi village which is situated in the Ob' basin.

2.2 Nominal system

The nominal system has three cases: Nominative, Dative, and Locative. The language distinguishes three numbers: singular, dual, and plural. Personal pronouns also distinguish three cases, but unlike nouns, they have dedicated affixes for Accusative and lack Locative. The pronominal system has three persons: 1st, 2nd, and 3rd.

Like many other Finno-Ugric languages, Khanty employs a full set of nominal suffixes encoding number and person of a possessor on a possessed noun. A possessor expressed by a full nominal or a free personal pronoun may or may not be present in addition – see (2a) and (2b) respectively. In Kazym Khanty, possessive affixes are obligatory only in the case of an overt free personal pronoun possessor (2a) and are optional otherwise.³ In (2c), in the noun phrase ‘Leshtan’s elder son’ a possessive marker is present on the head noun ‘son’ (2c), while in a noun phrase ‘sister’s dress’ in (2d) it is absent on the head noun ‘dress’.

- (2) a. *Ma pux-εm / *pux wən woš-ən wə-λ.*
I son-POSS.1SG / son big town-LOC live-NPST[3SG]
'My son lives in a big town.'

³According to Nikolaeva (1999b: 52), in Khanty lexical possessors do not trigger possessive marking on the head. In contrast, in our Kazym data (including data of WKhC) we register some cases of headmarking with lexical possessors. Thus, the distribution of possessive markers in Kazym is different from that in Ob' dialects, but establishing precise rules for it is outside the scope of the present paper.

- b. *Ake-m tiw χăt-əmt-əs.*
 uncle-POSS.1SG here move-PUNCT-PST[3SG]
 ‘My uncle came in.’ [WKhC, “Russian doll”]
- c. *λeštan-leŋke-λ wən poχ-əλ juχt-əs.*
 Leshtan-DIM-POSS.3SG big son-POSS.3SG come-PST[3SG]
 ‘The elder son of Leshtan came in’ [WKhC, “Bogatyr”]
- d. *Ma upε-m jernas λəmt-s-əm.*
 I sister-POSS.1SG dress put.on-PST-1SG
 ‘I put on my sister’s dress.’

Possessive affixes can also be attached to postpositions (3).

- (3) *Ma λiw piλ-aλ-a kulaš-ti pit-λ-əm.*
 I they with-POSS.3PL-DAT fight-NFIN.NPST become-NPST-1SG
 ‘I’ll fight with them!’ [WKhC, “The river land man and Ob’ river land man”]

Possessive affixes in Khanty also have a number of non-possessive functions: they can mark semantic/discourse features of a noun phrase such as definiteness, topicality, familiarity, as in (4a) (see Nikolaeva 1999b; Simonenko 2017; Mikhailov 2018 for a detailed discussion). The 2nd person singular possessive suffix is also used in a discourse function (4b), marking what can be roughly described as discourse salience. This is particularly frequent with person names.

- (4) a. *I ike-λ lup-λ.*
 one man-POSS.3SG say-NPST[3SG]
 ‘One man (the river land man) says:’ [WKhC, “The river land man and Ob’ river land man”]
- b. *Worŋa imi-j-en pa lop-t-aλ.*
 raven woman-OBL-TEXTBFPOSS.2SG ADD tell-EVID.PRS-3SG
 ‘(It appears that) The (female) raven says:’ [WKhC, “The raven and the gull”]

2.3 Verbal system

Kazym Khanty distinguishes two tenses:⁴ past and non-past. A verb has three argument marking patterns: subject agreement, subject-object agreement, and

⁴There is also a separate paradigm for evidential forms. These forms are participles in a predicative position inflected with possessive affixes for subject agreement.

passive. In the case of subject agreement, the verb obligatorily agrees with the subject in number (SG, DU, PL) and person (1st, 2nd, 3rd). Both intransitive (5) and transitive verbs (6a) attach subject agreement suffixes.

- (5) *Tăm još ewel̚t n̚ewrem-ət aškola-j-a jăŋχ-λ-ət.*
this road from child-PL school-OBL-DAT go-NPST-3PL
'Children go to school along this road.'

Like other Ob'-Ugric languages, Khanty employs differential object marking. In the absence of the Accusative case marker (except for pronouns), it comes in the form of object agreement. Transitive verbs in Khanty can optionally agree in number (singular vs. non-singular) with the direct object – this is expressed by subject-object agreement paradigm (6b). According to some reference grammars (e.g. Honti 1984), agreement with the object is licensed by the definiteness of the direct object. In Kazym, the system is more complex, with aspect playing a role (see below in §2.4).

- (6) a. *Was'a-j-en ar arij-s.*
Vasja-OBL-POSS.2SG song sing-PST[3SG]
'Vasja sang a song.'
b. *Was'a-j-en ar-əλ arij-s-əλλε.*
Vas'a-OBL-POSS.2SG song-POSS.3SG sing-PST-3SG>SG
'Vasja sang the/his song.'

The third argument marking pattern is passive, as in (7). The passive affix follows the tense markers on the verb, and then subject agreement affixes are attached. The logical subject is demoted to an oblique locative position. Apart from direct objects, in Kazym Khanty, Recipients and low Applicatives (7) can be promoted into the subject position (Nikolaeva 1999b; Colley & Privoznov 2019).

- (7) *(Ma) aŋk-əm-ən jernas-ən jənt-s-aj-m.*
I mother-POSS.1SG-LOC dress-LOC sew-PST-PASS-1SG
'My mother sewed a dress for me.' (lit. 'I was sewn by my mother with a dress.')

Like Hungarian, Khanty has a rich system of detachable preverbs which are grammaticalized adverbs. Some of them have the source semantics of space relations (cf. *nuχ* 'up', *ił* 'down'). A number of them have developed aspectual meanings (e.g. telicity, Kozlov 2019).

- (8) a. *Waška-j-en kinška λuŋt-əs.*
 Vasja-OBL-POSS.2SG book read-PST[3SG]
 ‘Vasja read the book/read the book for a while/was reading the book.’
- b. *Waška-j-en kinška nuχ λuŋt-əs-λe.*
 Vasja-OBL-POSS.2SG book up read-PST-3SG>SG
 ‘Vasja read the book (to the end)/#read the book for a while/#was reading the book.’

In (8a), the verb *λuŋtati* ‘read’ in past tense can have an atelic, a telic, and a progressive meaning. In contrast, in (8b) when accompanied with the preverb *nuχ* this verb can have only a telic reading, the atelic reading is unavailable (as indicated by #).

Khanty also makes use of a number of polyfunctional verbal affixes to encode valency-changing operations (causative, reflexive, middle, impersonal, and antipassive). This point is illustrated in (9).

- (9) a. *Aŋk-əm jernas upe-m-a jønt-λ.*
 mother-POSS.1SG dress sister-POSS.1SG-DAT sew-NPST[3SG]
 ‘My mother is sewing a dress for my sister.’
- b. *Aŋk-əm jønt-əs-λ.*
 mother-POSS.1SG sew-DETR-NPST[3SG]
 ‘My mother is sewing.’

Adding the detransitivising suffix *-əs* to a transitive verb *jøntati* ‘sew’ (9a) makes it intransitive (9b). The use of such verbal affixes is lexically restricted and not productive.

2.4 Clause structure

Khanty is a SOV language, but the word order is relatively free (Nikolaeva 1999b). Khanty employs accusative alignment. The choice between the three argument marking patterns discussed in the previous subsection depends on the information structure of the clause. Object agreement is used if the object is a “secondary topic” (this property often correlates with the definiteness of a noun phrase, see Nikolaeva 1999a). In Kazym Khanty, some speakers disfavour subject agreement on the verb if the direct object is a pronoun (disregarding whether it is bound or not) or a definite noun phrase. However, one more factor comes into play: the aspectual and actional properties of the verb (Kozlov 2019). The interaction of the aspectual interpretation of the clause and the object marking on the verb

is rather complicated. Roughly, a definite object and a subject agreement on the verb are possible only if the clause has an imperfective reading (10a); on the other hand, with certain telic verbs the definite direct object requires subject-object agreement under a perfective interpretation (10b). Consequently, both subject and subject-object agreement patterns on the verb are compatible with a definite/pronominal direct object.

- (10) a. *Petra χ•w män-ti woχ-əs.*
 Peter long.time I-ACC call-PST[3SG]
 ‘Peter was calling for me for a long time.’
- b. *Petra män-ti woχ-s-əλλe.*
 Peter I-ACC call-PST-3SG>SG
 ‘Peter called me up.’

Passive is a basic topic maintaining device (Nikolaeva 1999b: 30; Koshkaryova 2002: 35). Topic is encoded as a subject (Nikolaeva 1995, 1999b). Thus, passive is used to promote a non-subject argument (e.g. Theme, Recipient) in the subject position under topicalization (for a more detailed discussion of passive properties see Colley & Privoznov 2019; Kiss 2019), while focused subjects of transitive verbs are usually illicit:⁵

- (11) a. *Täm ar-əλ χuj-ən ari-s-a?*
 this song-POSS.3SG who-LOC sing-PST-PASS[3SG]
 ‘Who sang this song?’ (lit. ‘By whom was this song sung’)

⁵Under certain conditions some speakers allow focused subjects (i), but such examples are rare. As for intransitive verbs, the focused wh-word *χuj* ‘who’ can be used with a verb in active voice (ii.a), however, for some verb classes passive is also an option (ii.b) with a low applicative being promoted to the subject position.

- (i) *Xuj met χuw-a juwət-λ-əλe.*
 who most long-ADV throw-NPST-3SG>SG
 ‘Who will throw [this stick] the farthest’ [WKhC, “The Tale of the Priest and of His Workman Balda”]
- (ii) a. *Jetən oλəŋ-a ši ji-s χuj ši χuwat muw-a män-əλ.*
 evening begin-DAT FOC become-PST who this length land-DAT go-NPST[3SG]
 ‘– It’s evening, who’ll go all the way out here?’ [WKhC, “Pashit-Wort”]
- b. *Maša-j-en χot χujat-ən λuŋ-s-a.*
 Masha-OBL-POSS.2SG house who.INDF-LOC enter-PST-PASS[3SG]
 ‘Masha’s house was entered by someone.’ (Nikita Muravyev, p.c.)

- b. * *Xuj tǎm ar-əλ ari-s(-əλλə)?*
 who this song-POSS.3SG sing-PST-3SG>SG
 Intended: ‘Who sang this song?’

Example (11a) is a translation into Khanty of the sentence ‘Who sang this song?’: ‘this song’ is promoted into the subject position, while the focused wh-word *xuj* ‘who’ is marked by locative; if the focused wh-word occupies the subject position, the sentence is illicit (11b).

Kazym Khanty also uses subject pro-drop. In (12), the subject is expressed only on the verb, there is no overt 2nd person pronoun in the sentence. In (13), a series of clauses has the same subject ‘grandfather’ which is never expressed as a full nominal.

- (12) *Nāλm-en χoti wer-s-ən?*
 tongue-POSS.2SG what do-PST-2SG
 ‘– What have you done with your tongue?’ [WKhC, “A woman preparing sinews”]
- (13) *Ar moś wθ-s. Moś-λ-aλ χθw-ət.*
 many tale know-PST[3SG] tale-PL-POSS.3SG long-PL
 ‘[He] knew a lot of tales. [His] tales are long.’ [KKhC]

Object pro-drop is also possible:

- (14) *Śempər kew potali juwət-s-a λθw katəλ-s-əλλə.*
 Schemper stone lump throw-PST-PASS (s)he catch-PST-3SG>SG
 ‘[They] threw the Schemper stone, he caught [it].’ [WKhC, “The Schemper stone”]

In (14), the argument of the verb *katəλsəłłə* ‘caught’ occupying the direct object position (in the second clause) is not expressed overtly. It refers to the Schemper stone mentioned in the first clause.

It should be noted, however, that object drop does not license a reflexive interpretation, cf. the unavailability of the bound reading in (15):

- (15) *Upi pa jaj išək-λ-əλλən.*
 older.brother and older.sister praise-NPST-3DU>NSG
 {LC: The younger sister and brother performed very well.} ‘The older brother and sister praise [them/*themselves].’

2.5 Personal pronouns

In Khanty, personal pronouns have three case forms: Nominative, Accusative, and Dative. The pronominal system distinguishes three persons – 1st, 2nd, and 3rd – across three numbers: singular, dual, and plural. The paradigms of Kazym Khanty personal pronouns are presented in the Table 1.⁶

Table 1: Personal pronouns

	NOM	ACC	DAT
1SG	<i>ma</i>	<i>män-ti</i>	<i>mänem</i>
1DU	<i>min</i>	<i>min-t</i>	<i>minam(a)</i>
1PL	<i>məŋ</i>	<i>məŋ-t</i>	<i>məŋew</i>
2SG	<i>năŋ</i>	<i>năŋ-ti</i>	<i>năŋen</i>
2DU	<i>nij</i>	<i>nin-t</i>	<i>ninen(a)</i>
2PL	<i>nin</i>	<i>nin-t</i>	<i>ninen</i>
3SG	<i>λəw</i>	<i>λəw-ti / λəweλ</i>	<i>λəweλ(a)</i>
3DU	<i>λin</i>	<i>λin-t</i>	<i>λinan(a)</i>
3PL	<i>λiw (lij)</i>	<i>λiw-t</i>	<i>λiweλ</i>

The 3rd person pronouns in Kazym Khanty are only used with animate antecedents. If an antecedent is inanimate, speakers of Khanty resort to object drop, repeating the full NP or using a demonstrative. In (16), using the 3rd person pronoun *λəwti* to refer to the bowl is illicit; instead, the object is either dropped or the full NP *an-λ* ‘her bowl’ appears. Example (17) shows the use of a demonstrative *śi* ‘that one’.

- (16) *Maša-en λöt-əs χuram an. Ik-əλ-a*
Masha-POSS.2SG buy-PST[3SG] beautiful bowl husband-POSS.3SG-DAT
*(an-λ / *λəw-ti) išək-s-əλλe.*
bowl-POSS.3SG / (s)he-ACC praise-PST-3SG>SG
‘Masha bought a beautiful bowl. [She] praised [it] to her husband.’
- (17) *Wan'a-en śi-ti išək-λ-əλλe.*
Vanja-POSS.2SG that.one-ACC praise-NPST-3SG>SG
*‘Vanja praises it/him/*himself.’*

⁶In Kazym Khanty, the accusative and dative forms of pronouns differ from those in the Ob' region. However, there are speakers in Kazym who use the Ob' variants (*λəweλ* [(s)he.ACC] and *λəweλa* [(s)he.DAT]).

There are no dedicated possessive pronouns in Khanty, instead the Nominative form of a personal pronoun is used in possessive constructions, as in (18).

- (18) *Tām nāŋ λajm-en?*
 this you axe-POSS.2SG
 ‘Is it your axe?’ [WhKC, “The golden axe”]

3 Locally bound pronouns

3.1 Direct object

In Kazym Khanty, the majority of speakers use personal pronouns (non-reflexive forms) to encode binding. In (19), a 3rd person pronoun can be interpreted both as covalued with the subject of the clause or as coreferential to someone in the previous context.

- (19) *Maša-j-en_i λt̪w-ti_{j/j} λapət-əλ.*
 Masha-OBL-POSS.2SG (s)he-ACC feed-NPST[3SG]
 ‘Masha feeds herself/him.’

The constraints on bound vs. disjoint reading of pronouns in such cases vary across the speakers.⁷ For some speakers, the presence of object agreement on the verb licenses the bound reading of the pronoun (20a), while the subject agreement on the verb forces the disjoint reading (20b).

- (20) a. *λin λin-ti išək-λ-əλlen.*
 they.DU they.DU-ACC praise-NPST-3DU>NSG
 ‘They praised themselves’
- b. *λin λin-ti išək-λ-əŋən.*
 they.DU they.DU-ACC praise-NPST-3DU
 *‘They praise themselves.’/‘They praise them.’

This pattern is identical to the one described for Tegi Khanty in Volkova & Reuland (2014). For other speakers, verbal agreement seemingly plays no role, and a personal pronoun can get a bound or a disjoint reading either way. Consider (21a–21b): in (21a), the verb carries object agreement while in (21b) it agrees only with the subject; in both cases, the 3rd person pronoun *λt̪w* can be interpreted as bound or as referring to someone mentioned in the previous discourse.

⁷At this point in our discussion we are focusing on the so-called extroverted (or other-oriented) verbs. The differences in encoding reflexivity between extroverted and introverted (self-oriented) verbs will be addressed in §5.

- (21) a. *Kašəŋ χəjāt_i λəw-ti_{i/j} išək-s-əλλe.*
 every man (s)he-ACC praise-PST-3SG>SG
 ‘Every man praised himself/him.’
- b. *Kašəŋ χət_i λəw-ti_{i/j} išək-əλ.*
 every man (s)he-ACC praise-NPST[3SG]
 ‘Every man praises himself/him.’

Judgments on examples like (21) in Kazym Khanty often vary from speaker to speaker and from example to example elicited from the same speaker.

3.2 Indirect Object

Personal pronouns also encode reflexivity in the position of indirect (dative) object. Example (22) illustrates the point, *λəw* is encoding Experiencer in Dative.

- (22) *Paša-j-en λəweλa kăλ.*
 Pasha-OBL-POSS.2SG (s)he.DAT be.visible.NPST[3SG]
 ‘Pasha is visible to himself/him.’ (~‘Pasha is able to see himself/him.’)

For Recipient (23), Benefactive (24), and other semantic roles that are encoded in Khanty by Dative, the strategy is the same: a locally bound personal pronoun. Depending on the context, in all these examples *λəweλa* can also have a disjoint interpretation.

- (23) *Nem χujat λəweλa šiməλ-šək ān pun-λ.*
 NEG who.INDF (s)he.DAT few-ATT NEG put-NPST[3SG]
 ‘Nobody puts less to himself (than to others).’
- (24) *Waska-j-en λəweλa χot os-əs.*
 Vasja-OBL-POSS.2SG (s)he.DAT house build-PST[3SG]
 ‘Vasja built the house for himself/him.’

The 3rd person pronoun in the indirect object position cannot be anteceded by a direct object (25a), however, if it occupies a direct object position, an indirect object can serve as its antecedent (25b).

- (25) a. * *Ma χur-ən Pet'a λəweλa wantλta-s-əm.*
 I image-LOC Petja (s)he.DAT show-PST-1SG>SG
 Int.: ‘I showed Petja to himself on the photo.’
- b. *Ma χur-ən Pet'a-j-en-a λəw-ti wantλta-s-əm.*
 I image-LOC Petja-OBL-POSS.2SG-DAT (s)he-ACC show-PST-1SG>SG
 ‘I showed to Petja himself on the photo.’

3.3 Binding conditions for $\lambda_{\#w}$

As mentioned above, personal pronouns can be bound by non-referential expressions such as quantifiers. In example (26), the 3rd person pronoun $\lambda_{\#w}$ occupies the position of a direct object, and in (27) it occupies the position of an indirect dative object.

- (26) *Nem χujat $\lambda_{\#w}$ -t ān šøka-λ.*
 NEG who.INDF (s)he-ACC NEG offend-NPST[3SG]
 'Nobody will offend himself.'
- (27) *Kašøŋ ewi-ja jønt-λ $\lambda_{\#w}eλa$ tøtšaŋ χir.*
 every girl sew-NPST[3SG] (s)he.DAT for.needlework pouch
 'Every girl sews herself a pouch for needlework.'

In general, when a subject of a clause is a quantified expression, speakers prefer the bound interpretation of $\lambda_{\#w}$, but provided an appropriate context they allow the disjoint interpretation as well (28).

- (28) *Pet'a-j-en nuχ pit-øs. Kašøŋ kort-øŋ*
 Peter-OBL-POSS.2SG up become-PST[3SG] every village-ATTR
 $\chiøjæt-øw$ $\lambda_{\#w}$ -t išk-øλ.
 man-POSS.1PL (s)he-ACC praise-NPST[3SG]
 'Peter won (the game). Every man from the village praises him.'

If the antecedent is referential, there is no clear preference in favour of a bound or a disjoint reading, both are available. In (29), the verb in the first conjoined clause bears subject-object agreement while in the second clause it agrees only with the subject; in both clauses, the pronoun $\lambda_{\#w}$ can get either a bound or a disjoint reading.

- (29) *Maša-j-en_i šiwaλ-øs-λe $\lambda_{\#w}$ -ti_{i/j} χur χoši i*
 Masha-OBL-POSS.2SG see-PST-3SG>SG (s)he-ACC image to and
 Daša-j-en_k $\lambda_{\#w}$ -ti_{i/k/j} pa šiwaλ-øs.
 Dasha-OBL-POSS.2SG (s)he-ACC ADD see-PST[3sg]
 'Masha saw her(self) on the photo and Dasha saw her(self) too.'

The 3rd person pronoun $\lambda_{\#w}$ can also get a sloppy reading, cf. (30a). For the strict reading the speakers prefer repeating the full noun phrase, as in (30b).

- (30) a. *Maša-j-en* *šiwaλ-əs-λe* *λuω-ti* *χur* *χośi i*
 Masha-OBL-POSS.2SG see-PST-3SG>SG (s)he-ACC image to and
Daša-j-en *pa.*
 Dasha-OBL-POSS.2SG ADD
 ‘Masha saw herself in the photo and Dasha did so too (Dasha saw
 herself).’
- b. *Maša-j-en* *šiwaλ-əs-λe* *λuω-ti* *χur* *χosi i*
 Masha-OBL-POSS.2SG see-PST-3SG>SG (s)he-ACC image to and
Daša-j-en *iši Maša-j-əλ* *šiwaλ-əs.*
 Dasha-OBL-POSS.2SG too Masha-OBL-POSS.3SG see-PST[3SG]
 ‘Masha saw herself in the photo and Dasha saw Masha too.’

3.4 Postpositional phrases

Some postpositions in Khanty can attach case and possessive suffixes (e.g. *ewəλt-əm-a* [from-POSS.1SG-DAT] ‘from me’), similarly to possessed nouns (see §2.2 and §6). The complement noun phrase overtly expressed as a free personal pronoun triggers the agreement on the postposition.

- (31) *Ø_i Xəλ-mit* *χătəλ šiwaλ-əs* *jəš χoś-a* *λuω_i*
 Ø_i three-ORD day see-PST[3SG] road near-DAT (s)he
jeλpe-λ-ən *wən taś pa mir.*
 in.front.of-POSS.3SG-LOC big herd ADD people
 ‘On the third day he saw a big herd and people in front of him near the
 road.’ [WKhC, “The three wise words”]
- (32) *Paša-j-en_i* *λuω_{i/j} oλη-əλ-ən* *putərt-əs.*
 Pasha-OBL-POSS.2SG (s)he about-POSS.3SG-LOC tell-PST[3SG]
 ‘Pasha told about him/himself.’
- (33) *Maša-j-en* *ńewrem-λ-aλ-a_i* *λiω_i oλη-eλ-ən*
 Masha-OBL-POSS.2SG child-PL-POSS.3PL-DAT they about-POSS.3PL-LOC
putərt-əs.
 tell-PST[3SG]
 ‘Masha told the children about them.’

In (31–32), personal pronoun *λuω* is covalued with the subject of the clause. (32) illustrates the fact that both bound and disjoint readings are available for *λuω* in a postpositional phrase, as in object position. In (33), *λiω* is covalued with a dative object.

Kazym Khanty also employs uninflected postpositions. They can also take pronouns as their complements, and the pronouns can be covalued with the subject, as shown in (34).

- (34) *Mitχθ_i λθw_i rot-a nəməs-ij-əλ.*
 servant (s)he along-DAT think-IPFV-NPST[3SG]
 ‘The servant thinks to himself...’ [WKhC, “The Quick-witted servant of the king”]

Personal pronouns with the postposition *kut-ən* ‘between’ form a reciprocal postpositional phrase as in (35).

- (35) *λin_i kut-ən_i-ən jām-a wə-s-ŋən.*
 they.DU interval-POSS.2/3DU-LOC good-ADV live-PST-3DU
 ‘They had a good rapport with each other.’ [WKhC, “The Quick-witted servant of the king”]

There is also a lexeme *pānən* meaning ‘with oneself’. This lexeme has the properties of a dedicated presuppositional comitative in terms of Perkova (2018), meaning the involvement of one of the coparticipants is presupposed. In (36), the subject ‘they’ is covert, *pānən* serves as a comitative postposition, the second member of the comitative construction is *ime-λ* ‘his wife’. The presupposed member of the comitative construction is covalued with the covert subject, thus, the whole construction in (36) has the meaning ‘his wife with themselves’. Similarly in (37), the presupposed member of the comitative construction is covalued with the covert subject ‘he’, the construction with *pānən* means ‘his sack with himself’. In example (38), the subject *mitχθ* ‘servant’ is overt, the implicit member of the comitative construction is covalued with the subject rendering the constructions with the meaning ‘the king with the servant’.

- (36) *Jox̥li mān-s-ət ime-λ pānən tə-s-ət.*
 back go-PST-3PL wife-POSS.3SG with.self carry-PST-3PL
 ‘Back they went (and) took his wife with them.’ [WKhC, “The younger daughter of the sun”]
- (37) *Pānən χăl-i χir-əλ-ən təp χələm aj nāi*
 with.self food.for.travel-ATTR sack-POSS.3SG-LOC only three small bread
tāj-əs.
 take-PST[3SG]
 ‘He took only three little loaves of bread in his sack with him.’ [WKhC, “The boy from the other side”]

- (38) *Mityəχ χon pānən λe-ti οems-əs.*
 servant king with.self eat-NFIN.NPST sit-PST[3SG]
 ‘The servant and the king with him sat down to eat.’ [WKhC “The Quick-witted servant of the king”]

Summing up, in all relevant contexts Kazym Khanty employs locally bound personal pronouns to express reflexivity. The agreement pattern on the verb does not play a crucial role in the availability of a bound reading the way it does in the northern dialects of Khanty.

4 Pronoun doubling

4.1 Doubling $\lambda_{\#w}$

Some speakers prefer or even require a doubling strategy for coargument binding. Examples in (39–40) elicited from different speakers illustrate the cross-speaker variation. In (39), $\lambda_{\#w} \lambda_{\#w}ti$ forms a single unit which ensures a bound interpretation, cf. the impossibility of dropping $\lambda_{\#w}$ in (39b).

- (39) a. *Maša-j-en_i [λ $\#w$ λ $\#w$ -ti]_{i/*j} λapət-λ-əλλe.* (Speaker X)
 Masha-OBL-POSS.2SG (s)he (s)he-ACC feed-NPST-3SG>SG
 ‘Masha maintains herself by her own efforts (lit. Masha feeds herself).’
 b. *Xuj *(λ $\#w$) λ $\#w$ -ti muλχatλ išk-əs-əλλe.*
 who (s)he (s)he-ACC yesterday praise-PST-3SG>SG
 ‘Somebody praised himself yesterday.’

Other speakers disprefer this strategy (40a) or reinterpret $\lambda_{\#w} \lambda_{\#w}ti$ as a combination of an intensifier and a pronominal (on the use of $\lambda_{\#w}$ as a self-intensifier see §7). In (40), both interpretations (bound and disjoint) are available for a simple pronoun.

- (40) a. *Maša-j-en_i (*λ $\#w$) λ $\#w$ -ti_{i/j} λapət-λ-əλλe.* (Speaker Y)
 Masha-OBL-POSS.2SG (s)he (s)he-ACC feed-NPST-3SG>SG
 ‘Masha feeds herself/him.’
 b. *Was'a-j-en λ $\#w$ λ $\#w$ -ti ān wə-λ-λe.*
 Vasja-OBL-POSS.2SG (s)he (s)he-ACC NEG know-NPST-3SG>SG
 ‘Vasja himself doesn’t know himself.’

- c. *Maša-j-en* $\lambda_{\text{H}}w$ $\lambda_{\text{H}}weλa$ $jənt-as$ *jernas.*
 Masha-OBL-POSS.2SG (s)he (s)he.DAT sew-NPST[3SG] dress
 'Masha (herself) sews herself a dress.'

The order of the elements is also not fixed. Some speakers use the nominative form followed by the case form (39), one speaker also used the reversed order (41). In (41a), the verb bears subject-object agreement, in (41b), it agrees only with the subject, thus both options can be combined with the doubled pronoun.

- (41) a. *Učitel'-ət_i* $\lambda_{\text{i}}w-ti$ $\lambda_{\text{i}}w_{i/*j}$ *išək-s-əλλaλ.* (Speaker Z)
 teacher-PL they-ACC they praise-PST-3PL>NSG
 'The teachers praised themselves/*them.'
 b. *Učitel'-ət_i* $\lambda_{\text{i}}w-ti$ $\lambda_{\text{i}}w_{i/*j}$ *išək-s-ət.*
 teacher-PL they-ACC they praise-PST-3PL
 'The teachers praised themselves/*them.'

4.2 Combining $\lambda_{\text{H}}w$ and *i*

Some Kazym Khanty speakers also use a combination of a discourse particle *i* and a 3rd person pronoun to encode reflexivity. This option unambiguously yields a bound interpretation. For some, it does not depend on the type of agreement on the verb (can be combined with both the subject and the subject-object agreement), as in (42), others consider subject agreement on the verb in combination with *i λ_Hwti* illicit (43).

- (42) *Wan'a-en* *i* $\lambda_{\text{H}}w-ti$ *išək-λ(-əλλe).*
 Vanja-POSS.2SG PT (s)he-ACC praise-NPST(-3SG>SG)
 'Vanja praises himself/*him.'
 (43) *Evi-en* *i* $\lambda_{\text{H}}w-ti$ *išn'i* *lis-ən* *šiwaλ-as**(-λe).
 girl-POSS.2SG PT (s)he-ACC window glass-LOC see-PST-3SG>SG
 'The girl saw herself in the window glass.'

Summing up, personal pronouns in Kazym Khanty can have both a bound and a disjoint interpretation. If a speaker wants to avoid ambiguity, she can resort to an alternative strategy such as doubling of a 3rd person pronoun or adding a discourse particle *i* to a 3rd person pronoun. Both of these strategies are neither fully grammaticalized, nor accepted by all the speakers.

5 Verbal reflexivization

In Kazym Khanty, two detransitivising suffixes – *-əs-* (also *-as-*, *-aś-*) and *-ijλ-* – can function as verbal reflexivizers in combination with a closed class of verbs (grooming, bodily posture etc.). The use of the detransitivising suffix *-əs-* as a verbal reflexive is exemplified in (44).

- (44) a. *Maša-j-en λurt-as-əs.*
Masha-OBL-POSS.2SG cut.hair-DETR-PST[3SG]
'Masha got her hair cut.'
b. *Maša-j-en pux-əλ λurt-s-əλλe.*
Masha-OBL-POSS.2SG son-POSS.3SG cut.hair-PST-3SG>SG
'Masha cut her son's hair.'

The suffix *-əs-* can also mark reciprocity (45).

- (45) a. *λin λin küt-an-an taj-as-λ-əŋən*
they.DU they.DU interval-POSS.3DU persuade-DETR-NPST-3DU
'They persuaded each other.'
b. *Pet'a-j-en Was'a-j-λ taj-s-əλλe χot omas-ti.*
Peter-OBL-POSS.2SG Vasja-OBL-POSS.3SG persuade-PST-3SG>SG house
build-NFIN.NPST
'Peter persuaded Vasja to build a house.'

It also covers most of the meanings in the reflexive-middle domain on Kemmer's semantic map (Kemmer 1993), including middle and antipassive, cf. (46b) for deobjective and (46c) for potential passive (possibilitive).

- (46) a. *Aŋk-εm jønt-λ jernas.*
mother-POSS.1SG sew-NPST[3SG] dress
'My mother is sewing a dress.'
b. *Aŋk-εm jønt-əs-λ.*
mother-POSS.1SG sew-DETR-NPST[3SG]
'My mother sews (clothes).'
c. *Tam šaškan jäm-a jønt-əs-λ.*
this textile good-DAT sew-DETR-NPST[3SG]
'This textile is easy (good) to sew.'

Examples (47–48) illustrate the use of suffix *-ijλ-* as a verbal reflexive.

- (47) a. *Ewi-je-n λuxit-ijλ-əs.*
girl-DIM-POSS.2SG wash-DETR-PST[3SG]
'The girl washed.'
- b. *Maša-j-en još-ηəλ λuxit-s-əλλe.*
Masha-OBL-POSS.2SG hand-poss.3DU wash-PST-3SG>NSG
'Masha washed her hands.'
- (48) a. *Jivan-en ar vuχ repət-əs pa išək-ijλ.*
Ivan-POSS.2SG a.lot money earn-PST[3SG] and praise-DETR.NPST[3SG]
'Ivan earned a big sum of money and praises himself/boasts.'
- b. *Jivan-en jaj-əλ išək-əλ.*
Ivan-POSS.2SG brother-POSS.3SG praise-NPST[3SG]
'Ivan praises his brother.'

The suffix *-ijλ-* can also be used to mark reciprocity (49).

- (49) a. *Pet'a-en Maša-en piλ-a mosəlt-ijəλ-s-əηən.*
Petja-POSS.2SG Masha-POSS.2SG with-DAT kiss-DETR-PST-3DU
'Petja and Masha kissed.' (lit. 'Petja kissed with Masha.')
- b. *Im-əλ mosəlt-əs.*
wife-POSS.3SG kiss-PST[3SG]
'(He) kissed his wife.'

However, its primary function is to mark frequentative (Kaksin 2007), as can be seen from the contrast between (50a–50b).

- (50) a. *Want-i sorəm muw-n oλ ūi
look-IMP.SO dry ground-LOC lay.NPST[3SG] FOC
wojəmt-λ-a.
fall.asleep-NPST-PASS[3SG]*
'Look, (he) lies on dry ground, and he is about to fall asleep' [WKhC,
"The river land man and the Ob' land man"]
- b. *At-λ λiλ-əη teλ-n oməs-s-əλλe χuta
night-POSS.3SG soul-ATTR full-LOC sit-PST-3SG.SG where
wojəmt-ijəλ-s-a moj χuta āntə.
fall.asleep-IPFV-PST-PASS[3SG] or where NEG*
'...And so he spent the night, sometimes falling asleep, sometimes not.' [WKhC, "The river land man and the Ob' land man"]

The division of labour between *-əs-* and *-ijλ-* is lexically motivated. The existence of a certain suffixed form depends on a particular verb stem (cf. *λurt-* ‘to cut hair’ ~ *λurt-əs-* [cut.hair-DETR] ‘to cut self’s hair’ vs. **λuχit-əs-* [wash-DETR]).

With detransitivised verbs, *λtʷw* can occasionally be used as a self-intensifier modifying the subject in a dedicated construction with the postposition *satta-saxt*, cf. (51) (see §7.1 for details).

- (51) *Maša-j-en* $\lambda tʷw$ *saxt-əλ-a* *λuχit-ijλ-s.*
 Masha-OBL-POSS.2SG (s)he with-POSS.3SG-DAT wash-DETR-PST[3SG]
 ‘Masha herself washed herself’

The use of a bound personal pronoun or a doubled pronoun is also possible with grooming verbs (52–53), but speakers consider such examples artificial or triggering the meaning that by default the participant is incapable of performing this action on her own.

- (52) *Maša-j-en* $(\lambda tʷw)$ *λtʷw-t* *λuχt-s-əλλe.*
 Masha-OBL-POSS.2SG (s)he (s)he-ACC wash-PST-3SG>SG
 ‘Masha (herself) washed herself’
- (53) *Ajk-en* $\lambda tʷw-ti$ *λomλa-s.*
 boy-POSS.2SG (s)he-ACC dress-PST[3SG]
 ‘The boy (himself) dressed himself (the boy is usually dressed by somebody else, but now he has managed to do this himself).’

Therefore, to encode reflexivity with introverted verbs, speakers primarily use detransitivising suffixes or possessive constructions (see §6.2).

6 Reflexive possessive constructions

6.1 Adpossessive domain

To encode an anaphoric dependency between the subject of a clause and the possessor of a non-subject argument, Kazym Khanty employs a possessive affix sometimes accompanied by a free personal pronoun in the position of the possessor in a corresponding noun phrase:

- (54) a. *[Kašəŋ χəjät]_i* *arij-s* $(\lambda tʷw_{i/j})$ *ar-əλ.*
 every man sing-PST[3SG] (s)he song-POSS.3SG
 ‘Every man sang his (own)/his song.’

- b. [Kašəŋ χəjät]_i nəm-əλ-λe ($\lambda \# w_{i/j}$) kərt-əλ.
 every man remember-NPST-3SG>SG (s)he village-poss.3SG
 'Every man remembers his (own)/his village.'

A bound reading for the possessor of a direct object is available independently of the presence of object agreement on the verb: the verb agrees only with the subject in (54a) and with the subject and object in (54b). This comes in contrast with data reported for the Obdorsk dialect in Nikolaeva (1999b). In the Obdorsk dialect, a possessive affix is bound if the verb carries object agreement and can be interpreted as bound or disjoint in the case of subject agreement on the verb. In Kazym Khanty, both readings are available for both cases. The combination of a personal pronoun in the possessor position and a possessive affix is also used in 1st and 2nd person (see 55).

- (55) Ma ma muw-εm-ən jāŋχ-λ-əm.
 I I land-POSS.1SG-LOC go-NPST-1SG
 'I am walking through my land.' [WKhC, "The Quick-witted servant of
 the king"]

Some speakers who adhere to the non-doubling strategy of encoding reflexivity consider the overt pronoun redundant (56) and use it only to add emphasis.

- (56) Was'a-j-en (? $\lambda \# w$) ar-əλ ari-s-əλλe.
 Vasja-OBL-POSS.2SG s(he) song-POSS.3SG sing-PST-3SG>SG
 'Vasja sang his own song.'

Some speakers strongly prefer a bound interpretation if the possessor position is occupied by an overt pronoun. In (57), the first sentence provides a context which identifies Peter as the author of the song. Despite that, in (57a–57b) presented to speakers with this context, this interpretation (Peter is the author of the song) is not readily available. Sentence (57a) has a local antecedent in the Locative while the possessive noun phrase is the subject of the passive construction. Sentence (57b) exemplifies active alignment with subject agreement on the verb:

- (57) Pet'a-j-en isa arij-s $\lambda \# w$ ar-əλ.
 Peter-OBL-POSS.2SG always sing-PST[3SG] (s)he song-POSS.3SG
 'Peter always sang his (own) song.'

- a. *Muλχatλ kašəŋ χeјāt-ən arij-s-a λt̪w ar-əλ.*
 Yesterday every man-LOC sing-PST-PASS[3SG] (s)he song-POSS.3SG
 1) ‘Yesterday, every man sang his (own) song.’
 2) ‘%Peter sang his (own) song. Yesterday every man sang his (Peter’s) song.’
- b. *Kašəŋ χeјāt arij-s λt̪w ar-əλ.*
 every man sing-PST[3SG] (s)he song-POSS.3SG
 1) ‘Yesterday, every man sang his (own) song.’
 2) ‘%Peter sang his (own) song. Yesterday every man sang his (Peter’s) song.’

As was mentioned in §2.2, some discourse prominent noun phrases (the noun phrases under the scope of the pragmatic presupposition or noun phrases with secondary topic status, according to Nikolaeva 1999b) are marked with possessive affixes. In Kazym Khanty, direct objects with possessive affixes trigger object agreement on the verb (excluding imperfective clauses and noun phrases within the focus domain). There is a tendency among speakers to interpret such direct objects as belonging to subjects (associated with subject’s personal domain) even if the relationship between the subject and the direct object is not possessive in the proper sense of the word.

- (58) *Pet’ a tut juχ-λ-əλ χuλ sewar-s-əλλe.*
 Peter fire tree-PL-POSS.3SG all cut-PST-3SG>NSG
 ‘Peter cut all his firewood.’

In (58), the relationship between subject (Peter) and the direct object (firewood) is established on the basis of the involvement in the same situation and on the basis of the presence in the same scene (presupposed under the same conditions).

In Kazym Khanty, object agreement on the verb does not force subject orientation for the possessive affixes, as can be seen in (59a–59b). In example (59a), the possessive suffix *-əλ-* on the direct object “her son” is covalued with the noun phrase within a PP “from this woman”; in (59b), the possessive suffix on the direct object is covalued with the zero subject (‘the woman’ mentioned in the previous clause). In both cases, the verb carries object agreement.

- (59) a. *λt̪w si im-en ewəλt poχ-əλ wox-s-əλλe.*
 (s)he this woman-POSS.2SG from son-POSS.3SG beg-PST-3SG>SG
 ‘He begged this woman for her son.’

- b. Šālta met jøχət poχ-əλ tini-j-s-əλλe ši šoras
 then most later son-POSS.3SG sell-OBL-PST-3SG>SG this goods
 χθ-ja.
 man-OBL-DAT
 '(The woman)... then sold her son to this merchant.' [WKhC,
 "Bogatyr"]

Example (60) showcases that the antecedent of the possessor expressed with a possessive affix can be the direct object, which is possible both with subject-object agreement (60a) and with subject-only agreement on the verb (60b).

- (60) a. Maša-j-en ak-et_i χot-eλ_i-a kit-s-əλλe.
 Masha-OBL-POSS.2SG boy-PL house-POSS.3PL-DAT send-PST-3SG>NSG
 'Masha sent the boys to their house.'
 b. Maša-en ajk-et_i χot-eλ_i-n šiwaλ-əs.
 Masha-POSS.2SG boy-PL house-POSS.3PL-LOC see-PST[3SG]
 'Masha saw boys in their house'

In Kazym Khanty, at least for some speakers the unmarked direct object (indefinite direct object) does license the covalued interpretation of a possessive marker on another noun phrase (60b). In this respect, Kazym Khanty also differs from the Obdorsk dialect of Khanty described by Nikolaeva (1999b).

6.2 Possessive constructions in encoding argument binding

Possessive constructions are widely used with introverted verbs, in particular, they are preferred with grooming verbs, as in (61–62).

- (61) a. Was'a-j-en tuš-λ-aλ λurt-s-əλλe /
 Vasja-OBL-POSS.2SG whiskers-PL-POSS.3NSG cut.hair-PST-3SG>NSG /
 λurt-əs.
 cut.hair-PST[3SG]
 'Vasja shaved his whiskers.'
 b. Was'a-j-ən tuš-λ-aλ λurt-s-aj-t.
 Vasja-OBL-LOC whiskers-PL-POSS.3NSG cut.hair-PST-PASS-3PL
 'Vasja shaved his whiskers.' lit. 'His whiskers were shaved by Vasja.'
- (62) Maša-j-en eρət-λ-aλ nūχ kunš-s-əλλe.
 Masha-OBL-POSS.2SG hair-PL-POSS.3NSG up comb-PST-3SG>NSG
 'Masha combed her hair (herself).'

Possessive constructions can also be used with extroverted verbs to encode argument binding. In (63), instead of using the 3rd person pronoun λuw in the direct object position (as in ‘saw him(self)'), speakers prefer a possessive construction ‘(his) shadow image’ (=reflection).

- (63) *Was'a-j-en jinjk lot-a šeš-əs. Šāta šiwaλ-əs-λe*
Vasya-OBL-POSS.2SG water pit-DAT walk-PST[3SG] there see-PST-3SG>SG
 (λuw) is *xur-əλ.*
(s)he shadow image-POSS.3SG
‘Vasya came up to a puddle. He saw there his (own) reflection.’

To sum up, in Kazym Khanty there are no dedicated reflexive possessive pronouns or dedicated reflexive possessive affixes. The reflexivity in this context is encoded by means of possessive affixes. Besides, the possessor can be overtly expressed with a free personal pronoun in the possessor position in the noun phrase. Not only subjects but also direct objects can antecede possessive affixes irrespective of the agreement patterns on the verb. Possessive constructions are also often used both with introverted (especially, grooming verbs) and extroverted verbs in place of other ways of encoding reflexivity.

7 Self-intensification

7.1 The postpositional phrase with *satta-/saxt-*

Kazym Khanty employs a dedicated grammaticalized postpositional construction as an intensifier with the meaning ‘on one’s own, by oneself’. It consists of a personal pronoun and a postposition *satta-/saxt-* with a corresponding possessive affix, cf. (64). This intensifier is controlled by the subject. The subject triggers the possessive agreement on the postposition – cf. the contrast between (64) with the 1st singular subject and (65) with the 3rd singular subject.

- (64) *Ma ma satt-əm-a sit wər-λ-əm.*
I I with.self-POSS.1SG-DAT this do-NPST-1SG>SG
‘I do it myself.’
- (65) a. *λuw saxt-əλ-a moləpś-əλ*
(s)he with.self-POSS.3SG-DAT deer.skin.coat-POSS.3SG
λəmt-s-əλλe.
put.on-PST-3SG>SG
‘(He) himself put on his malitsa (deer skin coat) (without anybody’s help).’

- b. $\lambda\#w$ *saxətt-əλ-a* $\lambda\text{emət-λə-s.}$
 (s)he with.self-POSS.3SG-DAT put.on-DETR-NPST[3SG]
 '(He) dresses up by himself'

According to Kaksin (2007), the postposition *satta* ‘with’ occurs only with personal pronouns. The final affix *-a* is a dative or an adverbial affix. The construction can be literally translated as ‘me with myself’ (Kaksin 2007: 93). This construction is never used in the sense ‘alone, separately’ or in a contrastive context.

7.2 $\lambda\#w$ as an intensifier

Some native speakers use the anaphoric pronoun $\lambda\#w$ as an intensifier meaning ‘alone, separately’ (as in 66–67).

- (66) *Maša-j-en* $\lambda\#w$ *juxt-əs* *Petr-əλ* *ānt*
 Masha-OBL-POSS.2SG (s)he come-PST[3SG] Peter-POSS.3SG NEG
 $\lambda\text{awəλ-s-əλλe.}$
 wait-PST-3SG>SG
 ‘Masha came herself, she did not wait for Peter.’
- (67) *Maša-j-en* $\lambda\#w$ *wər-s* *ar.*
 Masha-OBL-POSS.2SG (s)he do-PST[3SG] song
 ‘Masha made the song by herself’

7.3 Other means of expressing intensification

In Kazym Khanty, there are several other expressions (adjectives and adverbs) conveying intensification or reflexive possession meanings. An adjective *jukan* ‘own, personal’ forces the coreferential reading of the possessor of a noun phrase and the subject of the clause, cf. (68).

- (68) $\lambda\#w$ *năj năń* *ānt* $\lambda\varepsilon-\lambda$ $\lambda\#w$ ($\lambda\#w$) *jukan năń-əλ*
 (s)he you bread NEG eat-NPST[3SG] (s)he (s)he own bread-POSS.3SG
 $wər-\lambda.$
 do-NPST[3SG]
 ‘She won’t eat your bread, she will cook her own bread.’

There is also a derivative *jukana* with the meaning ‘on one’s own, separately, for personal usage’: *jukana wəlti* ‘to live by himself’ (Solovar 2014: 102), cf. (69).

- (69) *Kərt-əŋ joχ λi w jukan-eλ-a təp iχušjaŋ wəλi*
village-ATTR people they own-POSS.3PL-DAT only eleven deer
tāj-λ-ət.
have-NPST-3PL

‘The camp people own only eleven deers privately.’ [WKhC, ‘In the camp’]

Another lexeme with a similar meaning is an adjective *ateλt* ‘alone’ and a corresponding adverb *ateλta*, its use is illustrated in (70).

- (70) *Ma ateλta wər-λ-əm.*
I separately live-NPST-1SG
‘I live on my own.’

Intensification across languages is often expressed by the same form as reflexivity. In Kazym Khanty, in the absence of dedicated reflexive pronouns, this function can be performed by personal pronouns (for the 3rd person), by a grammaticalized postpositional construction with the postposition *satta-/saχt-* or with the help of dedicated adjectives like *jukan* ‘own, personal’ or *ateλt* ‘alone’ and adverbs derived from them.

8 Strategies for overcoming ambiguity

The Kazym Khanty data is typologically unusual: There are no dedicated reflexive pronouns; personal pronouns, including the 3rd person pronoun *λəw* '(s)he', are used in reflexive contexts. Thus, the 3rd person pronoun can have both a reflexive and a disjoint reading. The question naturally arises, what are the ways of overcoming this ambiguity? When answering this question, the following factors should be taken into consideration. Firstly, the choice of discourse anaphora devices depends on the distribution of discourse topics and, hence, on the particular information structure of a clause: pronominal noun phrases tend to encode discourse prominent referents (discourse topics, cf. accessibility hierarchy of Gundel 1996), they refer to given information in a clause, and predominantly they are topics or secondary topics (Lambrecht 1994; Nikolaeva 1999b). Secondly, there is a direct mapping between information structure and an argument marking pattern (passive, object agreement) in Khanty. Thirdly, Khanty is a pro-drop language with possibility of direct object and possessor pro-drop.

Khanty exploits two primary strategies to avoid the conflict between reflexive vs. disjoint reading of the 3rd person pronoun in a non-subject position. As has

been shown by Nikolaeva (1999a,b), Colley & Privoznov (2019), and Kiss (2019), information structure is the crucial factor that licenses a particular argument marking pattern in the clause in Khanty. Topics occupy the subject position in Khanty. If a pronominal argument is coreferential with a noun phrase from the previous discourse, it is likely to be a topic (it is given, presupposed). The following possibilities are available for it: (i) this argument is topical while the other argument in the clause is not topical (new), (ii) both core arguments of a predicate are topical.

The case when one argument is topical and the other is new is illustrated in example (71). The subject of the first clause is the agent, *Paša*. In the second clause, a new participant is introduced as an agent of the verb ‘to praise’, *Paša* loses its agent role but preserves its topical status – the passive construction is required:

- (71) *Paša-j-en_i* *χot λaŋəl λešit-s-əλλe.* \emptyset_i
 Pasha-OBL-POSS.2SG house roof repair-PST-3SG>SG \emptyset
Aŋk-əλ-ən *išək-s-a.*
 mother-POSS.3SG-LOC praise-PST-PASS[3SG]
 ‘Pasha repaired the roof. [He] was praised by his mother.’

In the second clause in (71), the agent of the verb ‘to praise’ is *aŋkəl* ‘his mother’, it is new, it cannot occupy the subject position. Hence, it is demoted to the oblique position marked with locative. The verb bears the passive marker. The topical noun phrase coreferential to *Paša* occupies the subject position and has no overt expression in the clause. The accusative argument marking as in (72) is not ungrammatical *per se*, but it is not a natural continuation for the first sentence in (71) as it violates discourse coherence.

- (72) *Aŋk-əλ* *λtəw-ti išək-s-əλλe.*
 Mother-POSS.3SG (s)he-ACC praise-PST-3SG>SG
 ‘His mother praised him.’

A similar case is presented in (73).

- (73) *Aš-əm* *muλχattəl sort katl-əs,* *ši sort(-əλ)* *ma*
 father-POSS.1SG yesterday pike catch-PST[3SG] FOC pike(-POSS.3SG) I
jaj-əm-ən *nux eſaλ-s-i.*
 brother-POSS.1SG-LOC up let.go-PST-PASS[3SG]
 ‘My father caught the fish, my brother set it free.’

In (73), the noun phrase *sort* ‘pike’ is mentioned in the first clause and is the topic of the second one where it is the patient of the verb *esaλti* ‘let go’. It is promoted to the subject position, the full noun phrase is repeated, and the verb in the second clause is in passive. Summing up, in Kazym Khanty, the topicalization of an argument is usually accompanied by passivization: the topicalized argument is promoted into the subject position where it is either repeated as a full noun or dropped.

If both arguments in the clause are topical, the subject is a topic introduced in the previous discourse and the direct object is a secondary topic (“an entity such that the utterance is construed to be about the relationship between it and the primary topic”, Nikolaeva 1999a,b, cf. also “tail” in Vallduví 1992). This is the context where object-drop is used (74).

- (74) *Want-λ-əλλε χot χari kut-λ-əp-ən*
 look-NPST-3SG>SG house open.place distance-POSS.3SG-ATTR-LOC
nawərne-le_i ari-man oməs-əλ. Pupi poχ-ije Ø_i wu-s-λe
 frog-DIM sing-CVB sit-NPST[3SG] bear boy-DIM Ø_i take-PST-3SG>SG
još păte-λ Ø_i χătśə-s-λe nawərne-le wośləχ-a
 hand bottom-POSS.3SG Ø_i hit-PST-3SG>SG frog-DIM mud-DAT
ji-s.
 become-PST[3SG]

‘[He] looks, a frog is sitting on the floor and singing. The bear took [her], hit [her] with his hand, the frog turned into mud.’ (WhKC, “Little chipmunk”)

Example (74) is a fragment of a tale. The bear is a discourse topic in this part of the text. The bear goes to the house where he sees a frog. The frog is introduced in the first sentence and is also a discourse topic in this piece of text. In the consequent clauses the direct object referring to the frog has no overt lexical expression but is cross-referenced on the verb with the help of the subject-object agreement marker.

In other words, Kazym Khanty has an array of strategies (passivization, subject and object drop) that allow it to avoid 3rd person pronouns in the direct object position in the contexts where a familiar Standard Average European would have used a coreferential personal pronoun. This observation is also supported by the quantitative data. In the WhKhC corpus which has 2883 sentences in total there are only 17 clauses where *λuω* occupies the direct object position. Five of them are cases where the subject and the direct object differ in their grammatical features

(in person or number). The majority of the other cases stem from a retelling of a Russian tale and can be attributed to the influence of Russian.

Speakers of Kazym Khanty also employ a number of strategies to avoid locally bound 3rd person pronouns in the direct object position. These include replacing them with reflexive possessive constructions (§6.2) or using a detransitivised form of a verb instead of a transitive one. However, a 3rd person pronoun in the direct object position is a regular variant in isolated elicited sentences even though the native speakers are not consistent in their judgments on bound vs. disjoint readings. We hypothesize that the overt free pronoun in Kazym Khanty is, in a sense, reserved for reflexive contexts – see (75) where the bound 3rd person pronoun is contrastively focused.

- (75) *Was'a-j-en Pet'a-j-λ-a χur wan-əλt-əs.*
Vasja-OBL-POSS.2SG Peter-OBL-POSS.3SG-DAT image look-CAUS-PST[3SG]
Nəməs-əs śäta Pet'a-j-en pa (i) λəw-t śi
think-PST[3SG] there Peter-OBL-POSS.2SG ADD PT (s)he-ACC FOC
χur-əλ-ən uš-a wər-s-əλλe.
image-POSS.3SG-LOC brain-DAT do-PST-3SG>SG
- ‘Vasya was showing a photo to Petya. (He) thought that Petya was there, (but instead) found himself on the photo’

In naturally occurring texts, coreference (discourse-level anaphora) is usually expressed by other means, therefore there is no real competition between a bound and a disjoint reading for a 3rd person pronoun. But it may arise in isolated sentences presented to speakers.

To sum up, there are no grammatical constraints on the 3rd person pronoun in the direct object position in Kazym Khanty, but in naturally occurring texts its use is rare.

9 Conclusions

Kazym Khanty uses locally bound personal pronouns to express reflexivity. Their behavior, unlike in other dialects of Khanty, is not grammatically constrained. In other words, in most of the cases we considered, a pronoun can have both a bound and a disjoint reading, and one cannot predict the interpretation solely based on grammatical factors.

This is typologically unusual. Other languages reported in the literature to allow locally bound 3rd person pronouns are Frisian (Everaert 1986), Old English (van Gelderen 2000), and Haitian Creole (Zribi-Hertz & Glaude 2007). In general,

the use of dedicated strategies is considered the norm (Heine & Miyashita 2008; Moyse-Faurie 2008). Binding in Khanty thus violates the Principle B of the Binding Theory (Chomsky 1981). It is problematic for both the syntactic Reflexivity theory (Reinhart & Reuland 1993; Reuland 2011) and the semantics-based theory of Schlenker (2005), as well as for the theories that argue for the Disjointness presumption (Farmer & Harnish 1987; König & Siemund 2000) or for a blocking and obviation account (Kiparsky 2012).

In our paper we discussed factors influencing the encoding of reflexivity in Kazym Khanty and offered an account in terms of distribution of labour. Unlike many European languages, Kazym Khanty avoids ambiguity when a 3rd person pronoun is used. Coreference (discourse-level anaphora) is expressed by different strategies which depend on topic domains and patterns of their encoding. The two crucial factors are: (a) the choice of verbal argument marking regulated by the information structure and (b) the patterns for subject and object pro-drop. The use of 3rd person pronouns in a direct object position is rare and is reserved for a bound reading even if it can also get a disjoint reading.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ADD	additive	DIM	diminutive
ATT	attenuative	EVID	evidential
ATTR	attributive	NFIN	non-finite
DETR	detransitivizing affix	NPST	nonpast

NSG	non-singular
ORD	ordinal
PT	particle

PUNCT	punctual
SO	subject-object agreement

Acronyms

KKhC Kazym Khanty Corpus

WKhC Western Khanty Corpus

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Chapter 11

Reflexive constructions in Polish

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Polish, an Indo-European language of the West Slavic sub-branch, has three types of reflexive constructions. The coreference between agent and patient participant roles can be expressed by one of the following reflexivizers: *siebie*, *swój*, or *się*. The first reflexive nominal *siebie* shares the inflectional pattern with the personal pronoun, which is uncommon from a crosslinguistic perspective. The second reflexive nominal *swój* is used in the context of the 3rd person to make a formal distinction between 3rd person reflexive possessive pronouns and their nonreflexive counterparts. Finally, the reflexive clitic *się* is verbal, modifying the syntactic and semantic value of the verbal valency. Even if *się* is particularly frequent in impersonal constructions, its omnipresence in middle or reflexive domains is also non-negligible. Like in many Slavic languages, *się* may also encode the antipassive function.

1 Introduction

1.1 Classification, distribution and dialects of Polish

Polish belongs to the Indo-European language family, which together with Atlantic-Congo, Austronesian and Sino-Tibetan is one of the most populous language families of the world. Within Indo-European, Polish belongs to the Slavic group which falls into three major sub-groups: East, West, and South. Together with Czech, Slovak, and Sorbian, Polish belongs to the West Slavic group. Compared to other members of West Slavic, Polish has the largest number of speakers. It is also the second most widely spoken Slavic language.

Polish is a well-documented and well-studied language. It is spoken mainly in Poland, where it is an official language (see Figure 1). Today's calculations indicate that there are 38.5 million people who speak Polish as their first language.



In the Czech Republic, Slovakia, Hungary, west Belarus, Ukraine, and central-west Lithuania, Polish is spoken by many people as a second language.



https://commons.wikimedia.org/wiki/File:Polska_dialekty_wg_Urba%C5%84czyka.PNG CC-BY-SA
<https://commons.wikimedia.org/wiki/User:Aotearoa>

Figure 1: Subdivision of Polish dialects according to Stanisław Urbańczyk

Polish does not exhibit robust regional diversification. This refers to both grammar and lexicon. It attests four or five dialects, depending on whether Kashubian is included. The latter is spoken in the north-west of Poland around Gdańsk and presents characteristics typical for languages and dialects. Another dialectal area includes Great Poland in the west, centered around the cities of Poznań and Gniezno. The dialect spoken in this area served as the basis for the formation of literary Polish. Another area is Little Poland in the south-east, centered on

Kraków. This region greatly influenced the modern standard language. The third area is Mazovia. It encompasses the region around the capital city of Warsaw, extended to east and north-east Poland. The last area is Silesia in the south-west, with the major city of Katowice.

The chapter is organized as follows. In §1.2, I provide general remarks on Polish morphosyntax with special attention to clause structure, (§1.2.1), and noun phrase, (§1.2.2). I pass to pronouns in §2. I discuss personal pronouns in §2.1, reflexive pronouns in §2.2, and possessive pronouns in §2.3. §3 is dedicated to reflexive constructions, where I first elaborate on reflexive constructions with *siebie*, (§3.1), then, I explore reflexive constructions with *się*, (§3.2), and finally a word of explanation is given to reflexive constructions with the reflexive possessive pronoun, (§3.3). In §4, I explore coexpression patterns displayed by the reflexive form *się*. I close the chapter with a note on diachronic development of the refleivizers, (§5).

1.2 General remarks on Polish morphosyntax

1.2.1 Clause structure

Polish clause structure has a flexible word order. The dominant pattern is SVO, the second most common word order type in the world (Dryer 2013b). Case encoding and gender-number agreement between a verb and its core arguments shape the language toward accusative alignment. It is a pro-drop language where the omitted pronoun can always be pragmatically or grammatically inferred from the context. Reflexive, middle, impersonal, and antipassive are verb-coded valency-changing operations signaled by *się*.

1.2.2 Noun phrase

Polish has a well-developed gender system. Among various categories, nouns systematically recognize grammatical gender distinction. It is based on three divisions: masculine, feminine, and neuter. All singular nouns are either masculine, feminine, or neuter. Within the class of singular masculine nouns, Polish offers a more fine-grained differentiation between masculine animate and masculine inanimate. By contrast, plural nouns recognize only a masculine (or “virile”) and non-masculine (or “non-virile”) gender distinction. Gender plays a prominent role in agreement. Specifically, noun gender is relevant to noun-adjective agreement patterns and past tense agreement. Even if the noun gender is inherent in Polish, one cannot deduce its specific value from the noun form alone. It is only possible after determining the class declension to which a noun belongs.

Polish has a relatively rich case system, including nominative, accusative, genitive, dative, locative, and instrumental. Unlike Bulgarian and Macedonian, it did not develop articles corresponding to the English definite *the* and indefinite *a/an*. In this respect, Polish does not differ much from many languages of the world. Building on the sample of 620 languages provided by Dryer (2013a), Polish belongs to 198 languages that lack definite and indefinite articles. The noun phrase is thus vague in terms of definiteness, and whether a particular noun receives a definite or indefinite interpretation is either deduced from the context or resolved by demonstratives.

2 Pronouns

Polish has a rich set of pronouns, including personal, reflexive, possessive, demonstrative, interrogative, distributive, relative, and indefinite. In the present section, I will focus only on those that are relevant to reflexive constructions, namely personal pronouns §2.1, reflexive pronouns §2.2, and possessive pronouns §2.3.

2.1 Personal pronouns

The paradigm of the Polish independent personal pronouns with their clitic counterparts is illustrated in Tables 1 and 2. The former illustrates the 1st person and 2nd person personal pronouns, while the latter shows the 3rd person personal pronouns.

Table 1: 1st and 2nd personal pronouns in Polish based on Swan (2002: 153)

	1SG	2SG	1PL	2PL
NOM	<i>ja</i>	<i>ty</i>	<i>my</i>	<i>wy</i>
GEN	<i>mnie/mię</i>	<i>ciebie/cię</i>	<i>nas</i>	<i>was</i>
DAT	<i>mnie/mi</i>	<i>tobie/ci</i>	<i>nam</i>	<i>wam</i>
ACC	<i>mnie/mię</i>	<i>ciebie/cię</i>	<i>nas</i>	<i>was</i>
LOC	<i>mnie</i>	<i>tobie</i>	<i>nas</i>	<i>was</i>
INS	<i>mną</i>	<i>tobą</i>	<i>nami</i>	<i>wami</i>

As can be seen from Tables 1 and 2, Polish personal pronouns clearly distinguish between 1st, 2nd, and 3rd person. They are also sensitive to the number

Table 2: 3rd personal pronouns in Polish based on Swan (2002: 156)

	3SG(M)	3SG(F)	3SG(N)	3PL(VIR)	3PL(NVIR)
NOM	<i>on</i>	<i>ona</i>	<i>ono</i>	<i>oni</i>	<i>one</i>
GEN	<i>jego/go</i>	<i>jej</i>	<i>jego/go</i>	<i>ich</i>	<i>ich</i>
DAT	<i>emu/mu</i>	<i>jej</i>	<i>emu/mu</i>	<i>im</i>	<i>im</i>
ACC	<i>jego/go</i>	<i>jq</i>	<i>je</i>	<i>ich</i>	<i>je</i>
LOC	<i>nim</i>	<i>niej</i>	<i>nim</i>	<i>nich</i>	<i>nich</i>
INS	<i>nim</i>	<i>niq</i>	<i>nim</i>	<i>nimi</i>	<i>nimi</i>

and case of a noun or a noun phrase they substitute. The 3rd person pronouns additionally distinguish gender. Specifically, the singular form of a 3rd person pronoun is based on the masculine, feminine and neuter distinction, whereas its plural counterpart opposes only masculine vs. non-masculine. Like in English, the declension of personal pronouns in Polish is quite peculiar as the nominative form differs from other cases i.e., *ja* 'I' vs. *mnie* 'me', etc.

The nominative 1st and 2nd person pronouns are typically omitted. Their realization is, however, necessary when one emphasizes the importance of the subject, as in (1),¹ or seeks for clarification of meaning, as in (2), or contrasts the pronominal subjects, as in (3).

- (1) *Tylko ja pracuję w weekendy.*
only 1SG.NOM work.PRS.3SG in weekend.PL(NVIR).ACC
'Only I work on the weekends.'
- (2) *Czy my się znamy?*
Q 1PL.NOM SELF know.PRS.1PL
'Do we know each other?' (Sadowska 2012: 267)
- (3) *Jeśli ty się teraz zabawiasz, to ja sobie idę.*
if 2SG.NOM SELF now have.fun.PRS.2SG then 1SG.NOM SELF.DAT go.PRS.1SG
'If you're having fun now, then I'm on my way.'

Deleting the nominative 3rd person pronouns is possible when their referent is easily inferred from the context. They are, however, expressed when used for

¹Unless specified otherwise, I am the author of all examples.

the first time in a paragraph. In the subsequent text, they can be omitted as long as their referent remains clear.

Another peculiarity of the Polish personal pronouns is that some show a long vs. short opposition. In Tables 1 and 2, the short forms appear after the slashes. Represented by the six forms *mię*, *mi*, *cię*, *ci*, *go*, and *mu*, they behave like clitics. The short forms can neither carry their own stress nor appear sentences initially, as in (4). They also manifest distributional restrictions: unlike their long counterparts, the short forms cannot appear after a preposition, as in (5).

- (4) a. *Szukam cię. Kogo szukasz?*
look.for.PRS.1SG 2SG.ACC who search.for.PRS.2SG
'I'm looking for you. Who are you looking for?' (Swan 2002: 155)
- b. *Ciebie / *Cię szukam.*
2SG.ACC 2SG.ACC look.for.PRS.1SG
'I am looking for you.'
- (5) a. *Patrzy na mnie / *mię.*
look.PRS.3SG on 1SG.ACC 1SG.ACC
'He is looking at me.'
- b. *Myszę o tobie / *ci.*
think.PRS.1SG about 2SG.DAT 2SG.DAT
'I am thinking of you.'

The longer forms: *mnie* (vs. *mi*, *mię*), *ciebie* (vs. *cię*), *tobie* (vs. *ci*), *jego* (vs. *go*), *jemu* (vs. *mu*) are called emphatic pronouns and are used when emphasis is required (Bielec 1998). They obligatorily carry the stress. Like the remaining independent pronouns, *mnie*, *ciebie*, *tobie*, *jego*, and *jemu* can also occur at the beginning of the clause and after a preposition. The contrast between 1st person short clitic form *mi* and its longer equivalent *mnie* is illustrated in (6).

- (6) a. *Nauczyciel dał mi ksiazkę.*
teacher.SG(VIR).NOM give.PST.3SG 1SG.DAT book.SG(F).ACC
'The teacher gave me the book.'
- b. *Nauczyciel dał mnie ksiazkę.*
teacher.SG(VIR).NOM give.PST.3SG 1SG.DAT book.SG(F).ACC
'I was the one the teacher gave the book to.' (Feldstein 2001: 65)

The independent personal pronouns which do not recognize the short vs. long opposition can be stressed, depending on whether they are emphasized or not.

Despite their name, the referent of the personal pronouns in Polish may also denote animals or inanimate objects. This is illustrated in (7), where the inflected 3rd person masculine pronoun *nim* [3SG(M).LOC] corefers with the masculine noun *stół* ‘table’.

- (7) *Książki leżą na stole i pod nim.*
 book.NOM.PL(NVIR) lie.PST.3PL(NVIR) on table.SG(M).LOC and under 3SG(M).LOC

‘The books are on the table and under it.’ (Sadowska 2012: 265)

Polish personal pronouns share many properties with their English equivalents. For instance, they form a paradigm, are not morphologically transparent and exhibit restricted possibilities in terms of modification. However, they are necessarily referential, in particular definite. Thus, they cannot have a non-specific or generic interpretation. Neither can the Polish personal pronouns be used as bound variables. Example (8) illustrates the last point.

- (8) a. *Każda kobieta_i uważa, że ona_j jest mądra.*
 every.SG(F).NOM woman.SG(F).NOM consider.PRS.3SG that 3SG(F).NOM
be.PRS.3SG clever.SG(F).NOM
 ‘Every woman_i thinks that she_j is clever.’
- b. *Każda kobieta_i uważa, że jest_i mądra.*
 every.SG(F).NOM woman.SG(F).NOM consider.PRS.3SG that be.PRS.3SG
clever.SG(F).NOM
 ‘Every woman_i thinks that she_i is clever.’ (Siewierska 2004: 11)

In (8a), the anaphoric pronoun *ona* can be construed as coreferential only with some entity outside the clause. Since personal pronouns in Polish are necessarily referential, they cannot be interpreted as bound variables. As pointed out by Siewierska (2004), a bound variable interpretation is only possible if the person-number properties are expressed solely on the verb, as in (8b).

The contrast in the interpretation illustrated in (8) corresponds to two kinds of coreference recognized in the literature: discourse-referential interpretation and co-varying interpretation. Example (8a) exemplifies the discourse-referential reading because the anaphoric pronoun *ona* denotes a particular woman the referent of which can only be identified in the discourse. In contrast, (8b) exemplifies

a co-varying interpretation. The person inflected on the verb can be construed as bound by the quantified subject *każda kobieta* ‘every woman’ of the main clause.

Polish personal pronouns share one nominal feature based on sociolinguistic implications (cf. Siewierska 2004). Using the 3rd person pronouns is highly informal among adults. Thus, the system of the language developed special 3rd person pronouns with a formal flavor: *Pan*, *Pani*, and *Państwo*, which function as honorific 2nd person pronouns. They serve as alternatives to the informal 2nd person singular *ty* and plural *wy* forms. The 3rd person pronouns of polite, formal address is still visible in the agreement of the verb, as shown in (9).

- (9) *Pani powinna przeprosić za swoje zachowanie.*
Madam should.PRS.3SG(F) apologize.INF for 3SG(N).REFL.POSS.ACC behaviour.SG(N).ACC
'Madam, (you) should apologize for your behaviour.'

Polish speakers use honorific pronouns when they address a stranger, someone they do not know well, or someone of authority in order to express respect and distance. In the system, the honorific pronouns *Pan*, *Pani*, and *Państwo* function in parallel with their corresponding grammaticalized nouns, meaning ‘gentleman’, ‘lady’, and ‘ladies and gentlemen or Madam and Sir’ accordingly.

2.2 Reflexive pronouns

Polish has two reflexive forms, *siebie* and *się*, which display different formal and functional characteristics. In what follows, I will briefly summarize their similarities and differences. I will discuss them in detail in §3.1 and §3.2 respectively.

Regarding morphosyntactic characteristics, neither *się* nor *siebie* signals a gender distinction. They are also indifferent to the number category. Both, however, inflect for case. While *siebie* distinguishes all the cases except nominative, *się* realizes only genitive, dative, and accusative dative. Both forms thus constitute an incomplete (‘defective’) pronominal paradigm, given in Table 3.²

Since the reflexive pronoun *siebie* has the same inflectional pattern as the 1st person and 2nd person personal pronoun (cf. Table 3), undoubtedly they belong to the same paradigm. In addition to the similar inflectional paradigm, *siebie* exhibits other pronoun-like features. For instance, it cannot be modified or possessed. Coordination of the reflexive pronoun with the (personal) pronouns

²Table 3 has been adopted from Wiemer (2007: 517) and slightly modified.

Table 3: The reflexive forms in Polish

Case	Reflexive clitic	Independent reflexive pronoun	2SG independent personal pronoun	1SG independent personal pronoun
NOM	-	-	<i>ty</i>	<i>ja</i>
GEN	<i>się</i>	<i>siebie</i>	<i>ciebie</i>	<i>mnie</i>
DAT	(<i>se</i>) [*]	<i>sobie</i>	<i>tobie</i>	<i>mnie</i>
ACC	<i>się</i>	<i>siebie</i>	<i>ciebie</i>	<i>mnie</i>
LOC	-	<i>sobie</i>	<i>tobie</i>	<i>mnie</i>
INS	-	<i>sobą</i>	<i>tobą</i>	<i>mną</i>

rather than with nouns is rare crosslinguistically. This is a particularity of western Indo-European languages in particular of the Slavic and Germanic groups.

The difference between *siebie* and *się* also involves morpho-phonological variation. *Siebie* is defined as an independent pronoun. Hence, it is realized as a separate word and, what is more important, it takes the primary word stress. It also manifests syntactic independence because it may occur in isolation as an elliptical answer. Example (10) illustrates this possibility.

- (10) a. *Komu kupiłaś lody?*
 whom buy.PST.2SG ice.cream.ACC.PL(NVIR)
 ‘For whom did you buy ice cream?’
- b. *Sobie.*
 SELF.DAT
 ‘Myself’ (Sadowska 2012: 278)

By contrast, the grammatical features of the reflexive form *się* show the properties of clitics. Even if *się* occurs as a separate word, it is phonologically and morphologically dependent on the host. For instance, it lacks prosodic independence i.e., it cannot be stressed. The presence of *się* does not affect the place of the stress of words to which it is adjacent. Finally, *się* shows little, if any, syntactic independence. It has a restricted distribution relative to the independent form. For instance, it cannot appear in isolation or after a preposition. Consequently, the reflexive forms *siebie* and *się* belong to two different paradigms.

The morpho-phonological variation between *siebie* and *się* corresponds to what Kemmer (1993) calls the heavy vs. light distinction. The form of *siebie* is defined as heavy because it contains more phonological ‘body’ or ‘material’ that can be measured in terms of a number of segments. By contrast, *się* is considered

to have a light form. This means that like many other languages with a heavy vs. light opposition in the reflexive domain (e.g. Djola, Old Norse, Surselvan, Slavic), *się* is a dependent form that demonstrates reduced phonological material.

The difference between *siebie* and *się* reflects a nominal vs. verbal distinction. The possibility of occurring in non-object position or in isolation can be taken as an indication of the (pro)nominal features that are manifested by *siebie*. *Się* is more of the verbal type. It cannot appear in the non-object position. Its combination with a transitive verb may result in the modification of the syntactic structure of the verbal predicate. Moreover, both reflexive forms demonstrate functional differences. In contrast to *siebie* the use of which is primarily limited to express the coreferential meaning, *się* is highly polyfunctional with a wide scope beyond the coreference domain. Nevertheless, both the reflexive forms are diachronically related, where *się* is claimed to originate from the pronoun *siebie*.

2.3 Possessive pronouns

Polish has independent possessive pronouns that agree in gender, number, and case with the noun they refer to. Table 4³ and Table 5 offer their forms with differential and coreferential interpretation respectively.

Table 4: The differential possessive pronouns in nominative case in Polish

	1SG	1PL	2SG	2PL
M	<i>mój</i>	<i>moi</i>	<i>twój</i>	<i>twoi</i>
F	<i>moja</i>	<i>moje</i>	<i>twoja</i>	<i>twoje</i>
N	<i>moje</i>	<i>moje</i>	<i>twoje</i>	<i>swoje</i>

The peculiarity of the Polish possessive pronouns is a formal split at the level of the 3rd person pronoun, leading to the distinction between coreference vs. disjoint interpretation. Since the 3rd person possessive pronouns: *swój* [3SG(M)], *swoja* [3SG(F)], *swoje* [3SG(N)] (together with their plural equivalents) corefer with the subject participant of the clause, they are labeled reflexive possessive pronouns. They contrast with their possessive nonreflexive equivalents: *jego* [SG.M/N] and *jej* [SG(F)] (also with their plural equivalents, see 5). These pronouns signal that a possessor referent is different than subject. The formal split based on reflexive vs. nonreflexive possessive opposition is rare crosslinguistically. Many

³Tables 4 and 5 have been adopted from (Wiemer 2007: 519) and slightly modified.

Table 5: The coreferential possessive pronouns in nominative case in Polish

	3SG	3PL	3SG	3PL
M	<i>swój</i>	<i>swoi</i>	<i>jego</i>	<i>ich</i>
F	<i>swoja</i>	<i>swoje</i>	<i>jej</i>	<i>ich</i>
N	<i>swoje</i>	<i>swoje</i>	<i>jego</i>	<i>ich</i>

languages lack this distinction, thereby leading to referential ambiguity. A textbook example comes from English where in the clause *She went to her room*, the possessive pronoun *her* oscillates between coreference reading (*She went to her own room*) and a disjoint one (*She went to somebody else's room*).

3 Reflexive constructions

Polish distinguishes reflexive constructions with the independent reflexive pronoun *siebie*, reflexive constructions with the clitic form *się*, and reflexive constructions with the possessive reflexive pronoun *swój*. Since the general morphosyntactic characteristic of these three reflexive forms has already been introduced in §2, in what follows i.e., in §3.1, §3.2, and §3.3, I discuss their functional aspects and idiosyncratic properties.

3.1 Reflexive constructions with the reflexive independent pronoun *siebie*

Reflexive constructions with the reflexive independent pronoun *siebie* display peculiar properties in Polish. In the first part of the present section, I discuss their functional characteristics (§3.1.1), and the domain of coreference (§3.1.2). In the second part, I have a closer look at coreference of the subject with the beneficiary role (§3.1.3). In the final part, I explore the formal aspects of *siebie* with special attention given to its dative and accusative form (§3.1.4).

3.1.1 Functions

Depending on the subject, *siebie* is translated as ‘myself’, ‘yourself’, ‘herself’, ‘himself’, ‘itself’, ‘ourselves’, ‘yourselves’, or ‘themselves’. It primarily performs two functions. In the first place, the pronoun *siebie* corefers with a singular subject, leading to the reflexive interpretation, as shown in (11).

- (11) a. *Oskarzony bronil siebie zaciekle.*
accused.SG(M).NOM defend.PST.3SG(M) SELF.ACC fiercely
'The accused defended himself fiercely.'
- b. *Matka chroniła siebie i swoje dzieci.*
mother.SG(F).NOM protect.PST.3SG(F) SELF.ACC and
PL(NVIR).REFL.POSS.ACC child.PL(NVIR).ACC
'The mother protected herself and her children.'

The independent reflexive pronoun *siebie* can also be coreferential with the subject participant in the plural form. Here, it performs a reciprocal function, carrying the meaning of 'each other' and/or 'one another'. In fact, many Polish clauses with a plural subject and the reflexive pronoun *siebie* are ambiguous, situated at the interface of reflexive and reciprocal interpretations. Thus, in (12a–12b), both the reflexive and reciprocal readings are equally acceptable, and a broader context is required to resolve an interpretative ambiguity.

- (12) a. *Przyjaciele bronili siebie dugo.*
friend.NOM.PL(VIR) defend.PST.3PL(VIR) SELF.ACC for.a.long.time
i. 'The friends were defending themselves for a long time.'
ii. 'The friends were defending each other for a long time.'
- b. *Magda i Marta lubiły siebie.*
Magda.NOM and Marta.NOM like.PST.3PL(NVIR) SELF.ACC
i. 'Magda and Marta liked themselves.'
ii. 'Magda and Marta liked each other.' (Nedjalkov 2007: 263–264)

However, not all clauses with a plural subject and pronoun *siebie* in object function are ambiguous. The pragmatic context may occasionally help to provide disambiguation, as illustrated in (13).

- (13) *Przyjaciele obudzili siebie.*
friend.NOM.PL(VIR) wake.PST.3PL(VIR) SELF.ACC
i. *“The friends woke themselves up.”
ii. ‘The friends woke each other up (e.g. by snoring).’ (Nedjalkov 2007: 264)

3.1.2 Domain of coreference

Example (14) illustrates the distribution of the reflexive *siebie* in various syntactic contexts.

- (14) a. *Marek szanuje tylko siebie.*
 Marek.NOM respect.PRS.3SG only SELF.ACC
 ‘Marek respects only himself.’
- b. *Dziewczyny lubią tylko siebie.*
 girl.NOM.PL(NVIR) like.PRS.3PL(NVIR) only SELF.ACC
 ‘The girls like only themselves.’
- c. *Często mówicie do siebie na głos.*
 often talk.out.PRS.2PL to SELF.GEN on voice.SG(M).ACC
 ‘You often talk out loud to yourselves.’
- d. *Zawsze noszę na sobie czyste ubrania.*
 always wear.PRS.1SG on SELF.LOC clean cloth.PL(NVIR).ACC
 ‘I always wear clean clothes.’
- e. *Zamknij drzwi za sobą.*
 close.IMP.2SG door.PL(NVIR).ACC behind SELF.INS
 ‘Close the door behind you.’
- f. *Szybko znalazł sobie nową dziewczynę.*
 quickly find.PST.3SG(M) SELF.DAT new.SG(F).ACC girl.SG(F).ACC
 ‘He quickly found a new girl.’

Example (14) shows that *siebie* accepts two antecedent domains. The first is an autopathic domain (cf. Haspelmath 2023: §8 [this volume]) that refers to the coreference relation between subject and object in a monotransitive clause, as in (14a–14b). The second is recognized in the literature as the oblique domain and indicates the coreferential relation between the subject and an oblique participant of the same minimal clause. This can be observed in (14c–14f).

Unlike Turkish, Kashmiri and some other languages, Polish disallows coreference of the independent reflexive pronoun *siebie* with the grammatically less salient antecedent i.e., the dative object, as in (15). To express the coreference between the complement of the PP and the object, the language makes use of the pronominal nonreflexive anaphoric pronoun, e.g. *nim*, as in (16).

- (15) *Jan_i opowiedział Piotrowi_j o sobie_{i,*j}.*
 Jan.NOM tell.PST.3SG(M) Peter.DAT about SELF.LOC
 ‘John_i told Peter_j about himself_{i,*j}.’
- (16) *Jan_i opowiedział Piotrowi_j o nim_{i/j/k}.*
 Jan.NOM tell.PST.3SG(M) Peter.DAT about 3SG(M).LOC
 ‘John_i told Peter_j about him_{i/j/k}.’ (Siewierska 2004: 193)

3.1.3 Coreference of the subject with the beneficiary

Another type of context relevant to the present discussion involves a coreference between the subject and a non-patient participant such as beneficiary.

Benefactive events refer to the event wherein the subject participant performs an action that is of benefit either for himself or for a distinct participant. This leads to a ‘self-benefactive’ and ‘other-benefactive’ distinction. In self-benefactive events, the subject argument, therefore, assumes two semantic roles, that of the agent and that of the beneficiary, and the coreference between these two participants can be signaled in languages in multiple ways. For instance, in English, the agent-beneficiary coreference can be expressed either through the reflexive pronoun alone, as in *Paula bought herself a book* or by a reflexive pronoun coupled with the preposition: *Paula bought a book for herself*. By contrast, the clause such as *Paula bought a book for John* exemplifies a benefactive event where *John*, construed as the beneficiary, takes advantage of the action performed for him by the agent participant. Like English, Polish also expresses the coreference of subject with a beneficiary through the reflexive pronoun that may occur in two syntactic configurations. While the first involves the reflexive pronoun in dative form, (17a), in the second, the reflexive pronoun is in the accusative form and accompanied by the preposition *dla* ‘for’, (17b).

- (17) a. *Dziecko kupiło sobie lizaka.*
child.SG(N).NOM buy.PST.3SG(N) SELF.DAT lollipop.SG(M).ACC
‘The child bought herself a lollipop.’
- b. *Dziecko kupiło lizaka dla siebie.*
child.SG(N).NOM buy.PST.3SG(N) lollipop.SG(M).ACC for SELF.ACC
‘The child bought a lollipop for herself.’

The alternation in coding the beneficiary coreference is common for all Slavonic languages. Even if it is subject to free variation in Polish, there is a tendency to favor a morphologically less complex beneficiary expressed by the dative form rather than a prepositional phrase. This goes hand in hand with Swan’s (2002) observation and corpus-based study. A survey of the National Corpus of Polish shows, for instance, that the verbal form *kupil* [buy.PST.3SG(M)] occurs with the dative reflexive beneficiary form 287 times against 4 occurrences wherein the same participant is expressed through a prepositional phrase *dla siebie* [for SELF.ACC]. Building on the text-frequency criterion for markedness, Kemmer (1993) argues that self-benefactive constructions of the type (17a) are expected to happen far more frequently than their prepositional equivalents (17b).

The author reports two pieces of evidence in support of this prediction. The first comes from Surselvan (Indo-European). Stimm (1973: 50), who carried out a corpus-based study for this language, found only two examples of self-benefactive construction of the type (17b), against several hundred constructions of the type (17a). The second piece of evidence comes from English. Kemmer (1993: 76) extracted benefactive self-forms from a British written corpus, where the constructions of the type (17a) vastly outnumbered those corresponding to (17b).

3.1.4 Dative and accusative form of *siebie*

The dative form of *siebie* is used in many contexts optionally with a colloquial flavor. The pronoun adds a nuance of casualness, volitionality, subjectivity, aimlessness, perverseness, or even disregard. The omission of *siebie* makes the register less informal. Compare (18a) with (18b).

- (18) a. *Jak sobie chcesz.*
 as SELF.DAT want.PRS.2SG
 ‘As you want.’
 b. *Jak chcesz.*
 as want.PRS.2SG
 ‘As you want.’

Concerning the accusative form of *siebie*, it may compete with its light equivalent *się* in formal speech. Their analysis reveals some differences in the accusative context. Sadowska (2012) specifically underlines the emphatic (19a) and contrastive (19b) function performed by the heavy reflexive form alone. In other accusative contexts, the light form *się* is particularly favored, as shown in (19c).

- (19) a. *Tylko SIEBIE / *się widzę w lustrze.*
 only SELF.ACC SELF see.PRS.1SG in mirror.SG(N).LOC
 ‘I see only myself in the mirror.’
 b. *Widzę siebie / *się, ale ciebie nie widzę.*
 see.PRS.1SG SELF.ACC SELF but 2SG.ACC NEG see.PRS.1SG
 ‘I see myself, but I don’t see you.’
 c. *Widzę się w lustrze.*
 see.PRS.1SG SELF in mirror.SG(N).LOC
 ‘I see myself in the mirror.’

3.2 Reflexive constructions with the reflexive clitic form *się*

Reflexive constructions with the reflexive clitic form *się* are widely used in Polish. In the present section, I first approach this form from the functional perspective, (§3.2.1), with particular attention given to its non-standard but still productive dative use, (§3.2.2). Then, I discuss the unstable position of the form *się* in the clause, (§3.2.3). Finally, I propose a typology of reflexive verbs accompanied by the form *się*, (§3.2.4).

3.2.1 Functions

The reflexive form *się* means ‘self’. One of the functions it performs is to signal the coreference between two participants in the minimal clause. This situation is illustrated in (20), where the agent *oskarżony* ‘the accused’ in subject function, instead of defending a distinct participant, performs the act of defense on himself. The coreference is signaled through the reflexive clitic *się*.

- (20) *Oskarżony bronit się w sądzie.*
accused.SG(M).NOM defend.PST.3SG(M) SELF in court.SG(M).LOC
'The accused defended himself in a court.'

Like the corresponding independent reflexive form *siebie*, the clitic form *się* can also signal the reciprocal meaning in a clause. This observation holds particularly for the *się*-constructions with the plural subject. In Polish, such constructions are frequently ambiguous, oscillating between reflexive and reciprocal interpretations, as shown in (21).

- (21) *Asia i Janek czesali się codzienne.*
Asia.NOM and Janek.NOM comb.PST.3PL(VIR) SELF every.day
i. 'Every day Asia and Janek combed each other.'
ii. 'Every day Asia and Janek combed themselves.' (Wiemer 2007: 515)

To disambiguate such clauses, either an extended context or the use of a specific adverb is required. For instance, in (21), the reciprocal interpretation becomes evident if one of the two synonymous adverbs *nawzajem* ‘one another’ or *wzajemnie* ‘each other’ is added.

3.2.2 Dative form

I have already mentioned in §2.2 that in formal registers *się* only displays an accusative-genitive syncretism. However, linguistic descriptions occasionally mention the dative use of the form *se*, limited to colloquial use. The dative status of

się is intriguing. Since it has gone out of use in standard Polish, many grammars do not discuss it explicitly (Feldstein 2001; Swan 2003; Sadowska 2012). Nevertheless, *se* appears nowadays to be very productive in colloquial usage. In this respect, Swan (2002) mentions that in informal communication, the dative form *se* is highly marked stylistically. It adds to the communication a flavor of peasants' talks. This is because using the non-standard *se* is a distinctive feature of rural dialects. We observe that nowadays this form is widely accepted even by well-educated people, who employ it to color their utterances. The colloquial use of dative *se* in Polish contrasts with other Slavic languages like Czech or Bulgarian, in which such a form does not carry any stylistic and sociolinguistic implications and is perfectly acceptable in formal registers.

3.2.3 Positioning

The position of the reflexive form *się* within a clause is not stable. As a clitic form, it may have different hosts, preceding or following them. Even if different syntactic and stylistic factors condition this variable position, some clear tendencies can be distinguished. For instance, *się* favors the second position in a clause, as shown in (22–23).

- (22) *Dzieci się źle czują.*
 child.NOM.PL(NVIR) SELF bad feel.PRS.3PL
 'Children feel bad.' (Bielec 1998: 59)
- (23) *Janek się chce popatrzyć na ogród.*
 Janek.NOM SELF want.PRS.3SG look.INF at garden.SG(M).ACC
 'Janek wants to have a look at the garden.' (Sussex & Cubberley 2006: 391)

Even if in (23) *się* is hosted by the infinitive *popatrzyć* 'to look' of a subordinate clause, it still occupies the second position of the main clause. This possibility results from the fact that in Polish, a subordinate clause may shift the reflexive clitic to the left to meet the preference of this form for the second position. However, the configuration in which *się* is immediately adjacent to its host *popatrzeć* is also acceptable, as shown in *Janek chce się popatrzyć na ogród*.

According to Swan (2003), the position of *się* with regard to its verbal host is subject to language register. While in formal contexts the reflexive clitic favours the post-verbal position, as in (24a), in colloquial speech, it tends to precede the verb, as in (24b).

- (24) a. *Bardzo spieszę się.*
very hurry.up.PRS.1SG SELF
'I am in a big hurry.'
- b. *Bardzo się spieszę.*
very SELF hurry.up.PRS.1SG
'I am in a big hurry.'

Swan (2002) goes one step further and formulates the correlation between language register, the positioning of *się*, and the length of the verbal host: the less formal the style, and the shorter the verb, the more likely it is that *się* will take the position before the verb.

Another context in which *się* demonstrates to some extent a more or less stable position involves clauses in which it co-occurs with an enclitic (i.e., unstressed) personal pronoun. In this environment, the reflexive form tends to follow the pronoun rather than to precede it, as in (25).

- (25) *On mi się nie podoba.*
3SG(M).NOM 1SG.DAT SELF NEG like.PRS.3SG
'I don't like him.' (Swan 2002: 318)

Finally, *się* shows a strong regularity in the context of verb-initial-clauses. The clitic systematically occupies the position after the verb. The imperative clause illustrated in (26) may serve as an illustration of this type of structural configuration.

- (26) *Spiesz się powoli!*
hurry.up.IMP.2SG SELF slowly
'Hurry up slowly.'

In some contexts, the employment of *się* may be optional. This is particularly noticeable when multiple reflexive verbs are used within a single clause, where there is a strong tendency not to repeat the final *się*, as in (27).

- (27) a. *Chłopcy myją się i ubierają się.*
boy.NOM.PL(VIR) wash.PRS.3PL SELF and dress.up.PRS.3PL(VIR) SELF
'The boys are washing and dressing (themselves).'
- b. *Kasia uczy się i bawi się.*
Kasia.NOM learn.PRS.3SG SELF and play.PRS.3SG SELF
'Kasia learns and plays.' (Bielec 1998: 60)

Another context worth mentioning involves preposition phrases, in which the occurrence of *się* is prohibited. In (28), the only possible way to express the coreference of the subject is to use the reflexive pronoun *siebie*.

- (28) *Patrzę na siebie / *się w lustrze.*
 look.PRS.1SG ON SELF.ACC SELF in mirror.SG(N).LOC
 'I look at myself in the mirror.'

3.2.4 Reflexive verbs

The term 'reflexive verb' refers to any verb accompanied by the form *się*, without necessarily implying a meaning of coreference (e.g. *spieszyć się* 'to hurry up'). Reflexive verbs recognize a three-fold partition in Polish. The first group involves reflexive verbs that have active counterparts and where the presence of *się* does not affect the lexical meaning of the verb (*myć* 'to wash sb.' vs. *myć się* 'to wash oneself', *zginać* 'to bend sth.' vs. *zginać się* 'to bend oneself').

The second class encompasses reflexive verbs called deponents, which do not have nonreflexive counterparts (Kemmer 1993: 251), such as *bać się* 'to fear', *bawić się* 'to have a good time', *śmiać się* 'to laugh', *opiekować się* 'to look after', *kłócić się* 'to argue', *uśmiechać się* 'to smile'. Another characteristic of this group is that even if they combine with the reflexive clitic *się*, it is difficult to assign any particular function to this form. Finally, in Polish, deponent verbs often demonstrate a complex morphological form, being derived either from verbs, adjectives, or nouns. When derived from verbs, they carry one of the following prefixes: *do-*, *na-*, *o-(ob-)*, *od-*, *po-*, *prze-*, *przy-*, *roz-*, *u-*, *w-*, *wy-*, *z-*, *za-* (Brooks Zagórska 1975: 256).

The last group involves lexicalized reflexive forms i.e., verbs with active counterparts, but in which the presence of *się* shifts the lexical meaning of the base verb. The meaning of the lexicalized verbs is related in one way or another to the original meaning of the initial verb, as in *uczyć* 'to teach' vs. *uczyć się* 'to learn', *czuć* 'to detect a smell' vs. *czuć się* 'to feel', *chwalić* 'to praise' vs. *chwalić się* 'to boast'.

Reflexive verbs occur in all conjugations and follow the same tense rules as their active counterparts. Both syntactically intransitive and transitive verbs accept the reflexive form *się*. As far as intransitive forms are concerned, the language imposes restrictions on possible combinations that are difficult to encapsulate in a general rule (but see §4.2 on impersonal use of *się*). Hence, this constellation must be learnt individually, on a case-by-case basis. Regarding transitive

verbs with *się*, many of such verbs occur with the reflexive form without any constraints. In such cases, the clitic *się* may function as a valency-changing operator that reduces the syntactic transitivity of the input verb (cf. §4). The fact that the *się*-verb does not retain the syntactic structure of the core verb may serve as an indication of this reduction, as shown in (29).

- (29) a. *Chłopiec chwycił galąż.*
boy.SG(M).NOM grab.PST.3SG(M) branch.SG(F).ACC
'The boy grabbed the branch (to hold onto it).'
- b. *Chłopiec chwycił się gałęzi.*
boy.SG(M).NOM grab.PST.3SG(M) self branch.SG(F).GEN
'The boy grabbed the branch (to hold onto it).' (Janic 2016: 176–177)

In (29b), the object argument of the reflexive verb *chwycić się* differs from the one associated with the transitive verb *chwycić* 'to grab', (29a). It is no longer coded like a core argument since it carries the oblique i.e., genitive case.

In Polish, it is not only verbs that can host *się*. Deverbal nouns can also perform this function. Hence, expressions such as *mycie się zimną wodą* 'washing oneself with cold water', where the reflexive noun *mycie się* relates to the verb *myć się* 'to wash oneself', are perfectly acceptable. A similar observation holds for the non-clitic form *siebie*. The ability to combine deverbal nouns with the reflexive forms seems to be rare in the languages of the world. Among Slavic languages, only Polish seems to attest this possibility (Sussex & Cubberley 2006).

3.3 Reflexive constructions with the reflexive possessive pronoun *swój*

As indicated in §2.3, Polish makes a formal distinction between 3rd person reflexive possessive pronouns and their nonreflexive counterparts. This split leads to a coreference vs. disjoint-reference opposition, as illustrated in (30–31).

- (30) *Marek odwiedza swojego brata, a nie jego brata.*
Marek.NOM visit.PRS.3SG SG(M).REFL.POSS.ACC brother.SG(M).ACC but NEG
SG(M).POSS.GEN brother.SG(M).GEN
'Mark is visiting his (own) brother and not his (someone else's) brother.'

- (31) *Dzieci nie mają swoich paszportów, my mamy ich paszporty.*
 child.PL(NVIR).PL NEG have.PRS.3PL 3PL(NVIR).REFL.POSS.GEN
 passport.PL(NVIR).GEN 1PL.NOM have.PRS.3PL 3PL(NVIR).POSS.ACC
 passport.PL(NVIR).ACC
 ‘The children do not have their (own) passports, we have their passports.’
 (Bielec 1998: 162)

In (30), the accusative form *swój* ‘his own’ corefers with the subject, which is not the case with its nonreflexive anaphoric counterpart *jego*. The same contrast holds in (31) between *swoich* and *ich*, meaning ‘their’. In the context of the 1st person and 2nd person possessive pronouns, the referential ambiguity no longer holds and the choice between reflexive and nonreflexive forms is in general stylistically determined (Feldstein 2001: 73). Consider (32–33).

- (32) *Mam moją / swoją książkę.*
 have.PRS.1SG 1SG(F).POSS.ACC 1SG(F).REFL.POSS.ACC book.SG(F).ACC
 ‘I have my/my own book.’
- (33) *Masz twoją / swoją książkę.*
 have.PRS.2SG 2SG(F).POSS.ACC 2SG(F).REFL.POSS.ACC book.SG(F).ACC
 ‘You have your/your own book.’ (Feldstein 2001: 73)

Unlike English and many other languages, Polish is not very prone to code the possessive relation overtly. This applies to both inalienable and alienable possession. When the context is transparent, there is a tendency to omit the possessive pronoun. This is clear in the following two examples: in (34), it is self-evident that the addressee can only close his/her own eyes and that in (35) the agent could only defend the dissertation that she is the author of.

- (34) *Zamknij oczy.*
 close.IMP.2SG eye.ACC.PL(NVIR)
 ‘Close (your) eyes.’
- (35) *Obroniłam doktorat pod koniec 2013 roku.*
 defend.PST.1SG thesis.SG(M).ACC under end.SG(M).ACC 2013 year.SG(M).GEN
 ‘I defended my dissertation at the end of 2013.’

However, some contexts ask for explicit coding of the possessive relation. When the possessor is not the subject, a possessive pronoun serves to clarify the meaning, as shown in (36).

- (36) *jadę odwiedzić jego babcię.*
go.FUT.1SG visit.INF 3SG(M).POSS.ACC grandmother.SG.(F).ACC
'I am going to visit his (not mine) grandma.'

The possessive relationship is also explicitly coded in the context of contrastive emphasis. Comparison of (37a) with (37b) illustrates this contrast.

- (37) a. *Weź ubrania i daj mi*
take.IMP.2SG clothes.PL(NVIR).ACC and give.IMP.2SG 1SG.DAT
święty spokój.
sacred.SG(M).ACC peace.SG(M).ACC
'Take (your) clothes and leave me in peace.'
b. *Weź SWOJĘ ubrania a*
take.IMP.2SG PL(NVIR).REFL.POSS.ACC clothes.PL(NVIR).ACC and
MOJE zostaw w spokoju.
PL(NVIR).POSS.ACC leave.IMP.2SG in peace.SG(M).LOC
'Take your clothes and leave mine in peace.'

Finally, the reflexive possessive pronoun *swój* 'one's own' is also used when a speaker intends to highlight the greater specificity of the possessed item. Contrast (38a) with (38b).

- (38) a. *Ewa jeździ do pracy samochodem.*
Ewa.NOM go.PRS.3SG to work.SG(F).LOC car.SG(M).INS
'Ewa drives to work by car.'
b. *Ewa jeździ do pracy swoim samochodem.*
Ewa.NOM go.PRS.3SG to work.SG(F).LOC SG(M).REFL.POSS.INS
car.SG(M).INS
'Ewa drives to work in her own car.' (Sadowska 2012: 180)

4 Related functions performed by the reflexive form *się*

The functional scope of the reflexive clitic form *się* goes far beyond the coreference meaning. This grammaticalized form is nowadays highly polysemous, per-

forming a range of valency-reducing operations, including middle §4.1, impersonal §4.2, and antipassive §4.3.

4.1 Middle function

Middle formations denote events in which the subject participant is viewed not only as the doer of the action but also as the place on which this action is performed (see Benveniste 1966; Kemmer 1993; and Creissels 2006). Both the doer and the place of the event are construed as one single inseparable entity. This contrasts with the reflexive type of events, in which the subject assumes two semantic roles, agent and patient, the referents of which are conceived as distinct entities.

In Polish, the reflexive clitic *się* often participates in middle derivations. Swan (2003: 20) specifically mentions that the reflexive and reciprocal use of *się* is definitely not as frequent as its use to express middle types of events. The author reports the particularly frequent presence of *się* in grooming actions e.g. *cześać się* ‘to comb oneself’, *myć się* ‘to wash oneself’, *kąpać się* ‘to bathe oneself’, as in (39), or *golić się* ‘to shave oneself’, as in (40).

- (39) *Codziennie się kąpie.*
 every.day SELF bathe.PRS.1SG
 ‘I take a bath every day.’
- (40) *Goli się przed śniadaniem.*
 shave.PRS.1SG SELF before breakfast.SG(N).INS
 ‘I shave before breakfast.’ (Swan 2003: 584)

Grooming verbs may denote actions performed either on the whole body or only on its part. In Polish, the coding of whole-body actions may differ from body-part actions. For instance, when the action targets a particular body part, the language calls for a transitive construction with a body-part referent expressed as object. Compare (41) with (42).

- (41) *Muszę się umyć.*
 have.to.PRS.1SG SELF wash.INF
 ‘I have to wash up.’
- (42) *Muszę umyć ręce.*
 have.to.PRS.1SG wash.INF hand.PL(NVIR).ACC
 ‘I have to wash my hands.’ (Swan 2003: 584)

Within a middle domain, the clitic form also productively encodes change of body posture as in *kłaść* ‘to lie down’ vs. *kłaść się* ‘to lie down oneself’, *podnieść* ‘to uplift’ vs. *podnieść się* ‘to get up’, *opierać* ‘to lean’ vs. *opierać się* ‘to lean against’. Another type of middle event with *się* involves non-translational motions like *obrócić* ‘to turn’ vs. *obrócić się* ‘to turn oneself’. The reflexive form *się* is also highly productive in expressing emotional reactions or mental agitation: *złościć* ‘to make sb. angry’ vs. *złościć się* ‘to get angry’, *rumienić* ‘to brown sth’ vs. *rumienić się* ‘to blush’, *martwić* ‘to make sb. worry’ vs. *martwić się* ‘to worry oneself’, *denerwować* ‘to make sb. angry’ vs. *denerwować się* ‘to get angry’. Finally, *się* derivations also allow a decausative reading. The latter refers to verbs that express a change of state or physical process with no clearly implied agent, as shown in (43).

- (43) *W tym czajniku woda gotuje się bardzo szybko.*
in this.SG(M).LOC kettle.SG(M).LOC water.SG(F).NOM boil.PRS.3SG SELF
very quickly
'In this kettle, the water boils very quickly.'

In Polish, decausative formations alternate with impersonal reflexive derivations (cf. §4.2). Both remain in a close semantic affinity, revealing, however, a slight semantic difference. Unlike impersonal reflexive verbs, as in (44a), decausative ones, as in (44b), do not imply any potential agent, which would be necessarily involved in the development of an action denoted by a verb.

- (44) a. *Kawę się gotuje.*
coffee.SG(F).ACC SELF boil.PRS.3SG
'The coffee is being boiled.'
b. *Kawa się gotuje.*
coffee.SG(F).NOM SELF boil.PRS.3SG
'The coffee is boiling.' (Swan 2002: 320)

4.2 Impersonal function

Polish has a well-developed impersonal system. It recognizes three kinds of impersonal constructions, including impersonal reflexive, impersonal passive and impersonal with dedicated verbal *-no/-to* forms. Impersonal reflexive constructions, (45), select a verb in an invariable 3rd person singular form. The sentence lacks a grammatical subject, which leads to the impersonal interpretation. Polish

employs reflexive impersonal constructions extensively, which constitutes one of the peculiarities of the grammatical system of this language.

- (45) *Rozumie się.*
understand.PRS.3SG SELF
'It is understandable.'

When referring to past events, impersonal reflexive verbs occur invariably in the 3rd person neuter singular past-tense indicative form, suffixed with *-ło*, as in (46). When denoting present events, they are in the 3rd person singular present-tense form, as in (47). Finally, in the context of future events, predicates are complex, consisting of an auxiliary in the 3rd person singular future-tense form and the 3rd person neuter singular past *-ło* form, as in (48).

- (46) *Kiedyś wyłącznie pisało się listy.*
once exclusively write.PST.3SG(N) SELF letter.PL(NVIR).ACC
'In the past only letters were written.'
- (47) *Teraz pisze się listy i e-maile.*
now write.PRS.3SG SELF letter.PL(NVIR).ACC and email.PL(NVIR).ACC
'Now letters and emails are [being] written.'
- (48) *W przyszłości będzie się pisało tylko e-maile lub SMSy.*
in future.SG(F).LOC be.FUT.3SG SELF write.PST.3SG(N) only email.PL(NVIR).ACC or sms.PL(NVIR).ACC
'In the future only emails or SMS will be written.' (Sadowska 2012: 428)

Another distinctive feature of Polish impersonal reflexive constructions is that their verbs accept a direct object much in the same way as corresponding active verbs. However, what is atypical for them and what distinguishes these constructions from their equivalents in other languages (e.g. Serbo-Croatian) is that this noun phrase occurs in the accusative rather than the nominative, and that a verb invariably remains in the 3rd person singular form. This type of construction is an approximate equivalent of English clauses translated by 'one', 'you', or 'they'. Example (49) illustrates this point.

- (49) a. *Owe przesydy dzisiaj inaczej się interpretuje.*
such prejudice.PL(NVIR).ACC today differently SELF interpret.PRS.3SG
'One interprets such prejudices differently nowadays.'

- b. *Sprawę załatwia się od ręki.*
matter.SG(F).ACC fix.PRS.3SG SELF from hand.SG(F).GEN
'One will fix the matter without any problems.' (Siewierska 1988: 262, 246)

Impersonal reflexive constructions may also occur with dative arguments. The latter can be either represented by a personal pronoun e.g. *ci*, (50), or by a noun phrase e.g. *ludziom*, (51).

- (50) *Jak ci się spało?*
how 2SG.DAT SELF sleep.PST.3SG(N)
'How did you sleep?' (lit. How was sleeping to you?)
- (51) *Czy ludziom się tu dobrze mieszka?*
Q people.DAT.PL(NVIR) SELF here well live.PRS.3SG
'Do people live happily here?' (lit. Is living happy to people here?) (Bielec 1998: 60)

When compared to the corresponding active constructions, impersonal reflexives occurring with dative may imply a nuance of involuntary act, as in (52b) or disclaim responsibility, as in (53b). The semantic difference is, however, very subtle and difficult to grasp by English translations.

- (52) a. *Dobrze śpię.*
well sleep.PRS.1SG
'I sleep well.'
- b. *Dobrze mi się sypia.*
well 1SG.DAT SELF sleep.PRS.3SG
'I sleep well.'
- (53) a. *Tak tylko powiedziałem.*
so only say.PST.1SG(M)
'I only said that (i.e., I did not mean it.)'
- b. *Tak mi się tylko powiedziało.*
so 1SG.DAT SELF only say.PST.3SG(N)
'I only said that (i.e., I did not mean it.)' (Swan 2002: 312)

In the past tense, impersonal reflexive clauses, (54a), may alternate with dedicated *-no/-to* impersonals i.e., constructions with the neutral singular past indicative verbal form, (54b). Both types of impersonal clauses remain in strong semantic affinity and are subject to free variation.

- (54) a. *Wymienilo się kilka nazwisk.*
mention.PST.3SG(N) SELF few.PL(NVIR).ACC name.PL(NVIR).ACC
‘Several names were mentioned.’
- b. *Wymieniono kilka nazwisk.*
mention.PST.3SG(N) few.PL(NVIR).ACC name.PL(NVIR).ACC
‘Several names were mentioned.’ (Swan 2002: 316)

The occurrence of *się* in the impersonal context is very high. This may result from the fact that active verbs that normally do not combine with the reflexive clitic realise this restriction in the impersonal context. Practically, any non-*się*-verbs can admit the reflexive clitic to express the impersonal meaning as *być* ‘to be’ and *mieć* ‘to have’ in (55), or *spać* ‘to sleep’ in (56).

- (55) *Jak się było młodym, to się miało więcej czasu.*
how SELF be.PST.3SG(N) young.SG(M).INS then SELF have.PST.3SG(N) more time.SG(M).ACC
‘As you were young, you had more time.’
- (56) *Tutaj się dobrze śpi.*
here SELF well sleep.PRS.3SG
‘One sleeps well here.’ (Bielec 1998: 60)

Impersonal reflexive clauses are particularly frequent in the interrogative context, as shown in (57).

- (57) a. *Jak tam się jedzie?*
how there SELF go.PRS.3SG
‘How does one get there?’
- b. *Co się mówi w takiej sytuacji?*
what SELF say.PRS.3SG in such situation.SG(F).LOC
‘What does one say in such a situation?’ (Swan 2002: 320)

In impersonal reflexives, the implicit subject receives a human, indefinite interpretation. Thus, it may be unknown, generic and/or of a low degree of specificity. Logically such clauses cannot occur with overtly expressed subject and can only refer to the situations based on human activities, leading to a three-fold distinction: requests, as in (58a), commands, as in (58b), and statements, as in (58c).

- (58) a. *Jak się jedzie do Łodzi?*
how SELF go.PRS.3SG to Łódź.GEN
'How do you get to Łódź? (Swan 2002: 583)
- b. *Tak się mówi.*
so SELF say.PRS.3SG
'That's how it is said.' (Bielec 1998: 60)
- c. *Tutaj się tańczyło.*
here SELF dance.PST.3SG(N)
'There was dancing here.'

Whether impersonal reflexive constructions are indeed subjectless is in fact a matter of controversy in linguistic discussions. For instance, Comrie (1985) approaches this type of constructions as impersonal passive clauses with no overt subject and where the implied human agent is represented as a demoted underlying subject. On the other hand, Siewierska (1988) mentions that in the Polish linguistic tradition, impersonal reflexives are often viewed as fully active clauses where the implied human agent is both the underlying and surface subject. The description by Swan (2003: 538) aligns with this observation. The author argues that *się* occupies a quasi-nominal position, functioning thereby as subject.

4.3 Antipassive function

The reflexive clitic *się* may also perform the antipassive type of valency-changing operation. This means that it operates on a transitive verb without affecting the semantic roles of the associated arguments. The resulting construction is syntactically intransitive and the P argument loses the properties of a core argument. The syntactically downgraded P argument can either be realized as oblique, as in (29), repeated here for convenience as (59b), or is eliminated from the surface structure of a verb, as in (60b).

- (59) a. *Chłopiec chwycił galąż.*
boy.SG(M).NOM grab.PST.3SG(M) branch.SG(F).ACC
'The boy grabbed the branch (to hold onto it.)'
- b. *Chłopiec chwycił się gałęzi.*
boy.SG(M).NOM grab.PST.3SG(M) SELF branch.SG(F).GEN
'The boy grabbed the branch (to hold onto it.)' (Janic 2016: 176–177)
- (60) a. *Wasz syn bije dzieci.*
2SG(M).POSS.NOM son.SG(M).NOM beat.PRS.3SG child.PL(NVIR).ACC
'Your son beats up the children.'

- b. *Wasz syn bije się.*
 2SG(M).POSS.NOM son.SG(M).NOM beat.up.PRS.3SG SELF
 'Your son has a tendency to beat up [others].' (Janic 2016: 153)

Polish antipassive constructions with omitted P argument are characterized by the fact that this argument is in fact suppressed (or syntactically 'blocked'). Hence, it cannot be overtly realized. This type of antipassive construction is known in the literature under the label 'absolutive antipassive'. In Polish, the suppressed argument of absolutive antipassive clauses systematically receives a human interpretation. Unless explicitly specified by the context, it tends to display a low degree of specificity, triggering a generic, indefinite and/or non-referential reading. The verb denotes an unrealis, generic type of event, whereas the agent participant is viewed as having a special inclination or tendency to perform a denoted action.

Polish reveals a strong correlation between lexical meaning of a verb and the type of antipassive structure in which it occurs. Specifically, only verbs expressing an antagonistic action such as *kopać* 'to kick', *szczypać* 'to pinch', *pchać* 'to push' *przezywać* 'to nickname', *bić* 'to beat up', *drażnić* 'to annoy', *drapać* 'to scratch' *chlapać* 'to splash', *gryźć* 'to bite' and *pluć* 'to spit' can occur in absolute antipassive constructions (Janic 2016: 157).

5 Diachronic development

In her discussion of the middle voice, Kemmer (1993) classifies languages according to whether they express reflexive and middle functions through the same form. In case where they do, the author raises the question of whether these forms are related diachronically. Subsequently, she divides languages into three types: i) those with a one-form middle system, ii) those with a two-form cognate system, and iii) those with a two-form non-cognate system. Polish belongs to the second type, which is considered to be rare crosslinguistically. Among other languages with a two-cognate system, one can also mention Jola (Atlantic-Congo) with *-ɔrɔ* and *ɔ* distinctive though diachronically related forms, and other Slavic languages.

Kemmer (1993) argues that a two-form cognate system results from a diachronic process of repartition (Bréal 1897). The outcome of such an evolution is a division of a single form into two distinct, heavy and light forms. The heavy form usually displays (pro)nominial features, whereas the latter, due to grammaticalization, shares the characteristic of clitics. The occurrence of the light form

results from renewing or reinforcing of the heavy form. This form is reintroduced to a language system as a relatively independent element. Then, due to coalescence or erosion, it undergoes phonological reduction. Thus, at the synchronic level, the light form is viewed as a reduced form of the heavy form. The formal split of a single form converges with the semantic division of labour. The light form is typically assigned to the middle domain, in contrast to its heavy counterpart, which maintains its initial coreference meaning.

The analogous development took place in Polish, where the light form *się* that demonstrates the properties of clitics originated in the heavy form *siebie*. The formal split aligned with the semantic extension. The grammaticalized form *się* extended the functional scope to the middle domain, preserving, however, the initial reflexive function. The next step of grammaticalization involves desemanticization (or ‘semantic bleaching’) where in some contexts the clitic *się* loses the semantic content and starts to operate on a structural basis alone (e.g. impersonal or antipassive). In Polish, the encroachment of *się* into a more structural-based field did not, however, lead to its total desemanticization. Even if *się* is particularly frequent in impersonal contexts, its omnipresence in middle or reflexive domains is also non-negligible.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

NVIR non-virile VIR virile

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Chapter 12

Reflexive constructions in Thulung

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In this contribution, I present reflexive constructions in Thulung (Sino-Tibetan, Nepal). After introducing the language and its basic morphosyntax, I describe the primary reflexive strategy, which is the reflexive voice marker *-sit̪*, as well as the other uses of the same voice marker and the unclear status of the emphatic nominal *twap* in reflexivization. I then discuss the expression of coreference with different verb types, and with different semantic roles, before describing the difficulties of expressing partial coreference. I close the chapter with examples of long-distance coreference, a relatively simple situation in Thulung, which can embed reported discourse (or thought) only as direct speech.

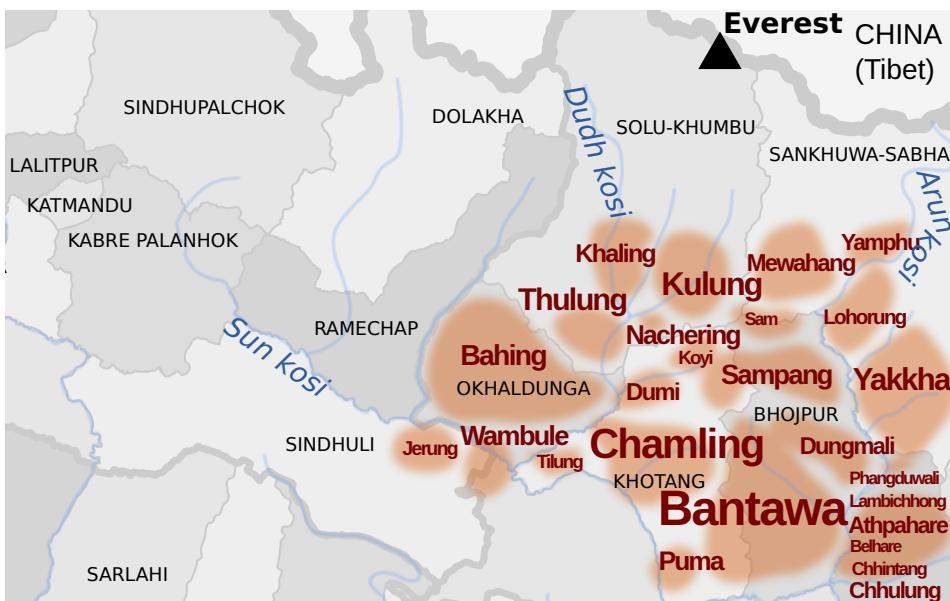
1 Introduction to Thulung

Thulung is a language of the Kiranti subgroup of Sino-Tibetan/Trans-Himalayan, spoken by several thousand speakers in Solukhumbu district in Eastern Nepal (across the villages of Mukli, Deusa, Kangel, Lokhim, Jubu, Panchan, Salle, Necha); see Figure 1. The language is exclusively oral, although missionary efforts over the past twenty years have resulted in the translation of the Old Testament, transcribed in an adapted version of Devanagari.¹ The data discussed herein comes from fieldwork I have carried out on Thulung since 1999.

Like other Kiranti languages, Thulung is in close contact with Nepali (Indo-Aryan), the national language of Nepal, resulting in a number of calqued constructions.

¹The main adaptations concern the phonemes /u/ and /e/; vowel length is not transcribed.





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Figure 1: Map of the Kiranti-speaking area, based on Schlemmer (2019)

2 Basics of Thulung morphosyntax

While a minimal Thulung sentence can consist of a single finite verb, arguments are often present in the form of pronouns or full noun phrases. Arguments are identified on the basis of case-marking and indexation.

This section presents the personal pronouns of Thulung (§2.1), and the case-marking and indexing of core arguments (§2.2), both important preliminaries to understanding the language's reflexive constructions.

2.1 Personal pronouns

Personal pronouns exhibit person, number (singular, dual, plural), clusivity and formality contrasts. The paradigm is shown in Table 1.

The formality contrast in 2nd and 3rd person singular pronouns is a relatively new phenomenon. An earlier description (Allen 1975) reports 2SG *gana*, 2PL *gani*, 3SG *gu* and 3PL *gumi*. It appears that new formal pronouns were created for the 2SG and 3SG by coopting the 2PL and 3PL pronouns, respectively, some time between Allen's fieldwork and the start of my own in 1999. The creation of new

Table 1: Personal pronouns of Thulung

	SG	DU	PL
1	<i>go</i>	<i>gutsi</i> (incl.) <i>gutsuku</i> (excl.)	<i>gui</i> (incl.) <i>guku</i> (excl.)
2	<i>gana</i> (inform.) <i>gani</i> (formal)	<i>gatsi</i>	<i>gani</i> (-mim)
3	<i>gu</i> (inform.) <i>gumi</i> (formal)	<i>gutsi</i>	<i>gumi</i> (-mim)

plural pronouns through suffixation of the nominal pluralizer *-mim* filled the resulting gap in the pronoun system, even though speakers currently tend to use both new and old plural forms with about equal frequency (Lahaussois 2003).

2.2 Case-marking and indexing of core arguments

Core arguments are identified through case-marking and argument indexation, which are conditioned by the referential hierarchy (e.g. Silverstein 1976; De-Lancey 1981) in (1):

- (1) 1 > 2 > 3 > human > non-human animate > inanimate

Thulung has a split ergative case-marking system, with the split occurring within the person section of the hierarchy. When acting as A arguments, two case-marking possibilities exist: 1st singular, 2nd singular, 2nd dual persons are nominative-marked (i.e. unmarked); this is what is seen in (3) and (5) below. Other A arguments, namely 2nd plural, 3rd persons and other NPs, are ergative-marked (with *-ka*,² as is seen in (4) and (6) below.

Object arguments also have differential marking, with the split occurring within the animacy part of the referential hierarchy. The dative marker *-lai* (glossed DAT), borrowed from Nepali, appears on primary objects (“an indirect object in a ditransitive clause or a direct object in a monotransitive clause”, Dryer 1986: 808) characterized by animacy: it is generally found with high-status humans (see 5–6 below), and only optionally with low-status humans (e.g. children) and occasionally animals ('dog' is unmarked in 3–4). Inanimate objects are

²The unusual position of the split, within the 2nd person, can be explained as resulting from the creation of new plural pronouns with suffixation of the nominal pluralizer *-mim*. Presumably, *-mim*, previously only found with 3rd person-like NPs, triggered ergative-marking on the new 2PL form *gani-mim* (through analogy with other *-mim*-marked NPs).

almost never marked. (For some discussion of primary object marking across Tibeto-Burman and its semantic nature, see LaPolla 1992).

A few alignment patterns illustrate the marking of core arguments, encoded as follows: ‘S-∅ V-s’ translates to mean that the S argument is unmarked, and the verb (V) takes indexation for the single S argument (see 2). Similarly, with transitive scenarios, ‘A-∅ P-∅ V-a>p’ is to be translated as two unmarked A and P arguments and a verb with indexation for A and P.

- (2) S-∅ V-s:

gu khor
3SG[-∅] snore[.3SG]
'He snores.'

- (3) A-∅ P-∅ V-a>p:

go khlea jal-u
1SG[-∅] dog[-∅] strike-1SG>3SG
'I strike the dog.'

- (4) A-ka P-∅ V-a>p:

gu-ka khlea jal-u
3SG-ERG dog[-∅] strike-3SG>3SG
'He strikes the dog.'

- (5) A-∅ P-lai V-a>p:

go me matsu-lai jal-u
1SG[-∅] DEM man-DAT strike-1SG>3SG
'I strike that man.'

- (6) A-ka P-lai V-a>p:

gu-ka go-lai jal-ŋi
3SG-ERG 1SG-DAT strike-3SG>1SG
'He strikes me.'

Thulung verbs index up to two arguments³ on verbs, with a series of intransitive person indexes and a series of transitive indexes. Verbs are often labile, with the same root occurring with either transitive or intransitive indexes, and bringing about changes to argument structure and semantics.

³These are A and P in a monotransitive scenario, and either A and R (for secundative verbs) or A and T (for indirective verbs) in ditransitive scenarios.

3 Reflexive strategy and uses

This section will present the reflexive voice marker (§3.1), additional uses of the same marker (§3.2), and raise the question of the role of the emphatic nominal in reflexive constructions (§3.3).

3.1 Reflexive voice marking

Thulung has a reflexive voice marker, *-sit* (and allomorphs *-si*, *-sin*, *-sik*), which is the primary strategy for expressing agent-patient coreference. It occurs in a specific slot of the verbal template and has been reconstructed to proto-Kiranti **-nši* (van Driem 1990: 47). The reflexive voice marker has a number of functions: the central one is reduction of the valency of the verb,⁴ which can thereby only take intransitive indexes. This brings about the interpretation of the agent and patient, neither of which is necessarily overtly expressed (although the agent is overtly expressed in 7–9), as coreferential.

- (7) *go sol-si-ŋu-mim tsʌŋra tel-ka kla:-si-ŋu*
1SG wash-REFL-1SG-NMLZ after oil-INS rub-REFL-1SG
'After I wash, I rub myself with oil.'
- (8) *go oram-nuŋ tseŋ-si-ŋu*
1SG DEM.PROX-COM hang-REFL-1SG
'I will hang (myself) onto this.' [holding onto a monkey's tail to escape from imprisonment]
- (9) *meram mətsə u-twap-ŋa sen-s-ta*
DEM man 3SG.POSS-self-INT kill-REFL-3SG.PST
'The man killed himself.' (elicited)

Sentence (9) could equally well be formulated with a 3SG pronoun subject as in (10):

- (10) *gu u-twap-ŋa sen-s-ta*
3SG 3SG.POSS-self-INT kill-REFL-3SG.PST
'He killed himself.'

It is interesting to contrast this with the expression of the object pronoun in situations of disjoint reference, which in this case would yield (11):

⁴Note however that in Thulung, as in related Khaling, intransitive verbs can sometimes be reflexivized (see Lahaussois 2016: 57–58; Jacques et al. 2016: 44; Jacques 2015).

- (11) *gu-ka meram-lai set-dt*
 3SG-ERG DEM-DAT kill-3SG>3SG.PST
 ‘She killed him.’

Note that the use of the distal demonstrative *meram* as the object pronoun makes it clear that this is a case of disjoint reference, with the distal deixis establishing otherness.

While there is a single reflexive voice marker, which is obligatory in reflexive constructions and occurs in full paradigms (see Table 2), with no restrictions as to person/number and tense, there is an older, no longer productive reflexive marker, the reflex of which is found in many verbs with middle semantics. This older reflexive marker only surfaces in partial paradigms, as an *-s* on the verb stems that occur with 1PI and 3SG forms (see grey cells in Table 3), and verbs where it appears are now considered to form an inflectional class (the s-stem class). Interestingly, this class is not limited to intransitive verbs: transitive verbs are also found (bearing transitive indexes), though in considerably lower numbers than intransitives.

The two paradigms are contrasted in Tables 2 and 3.

Table 2: Paradigm for verb *khlo:simu*, ‘return’, with the reflexive voice marker *-si* (or allomorphs) in all forms

	NPST	PST
1SG	<i>khlo:-si-ŋu</i>	<i>khlo:-si-ŋro</i>
1DI	<i>khlo:-si-tsi</i>	<i>khlo:-sit-tsi</i>
1DE	<i>khlo:-si-tsuku</i>	<i>khlo:-sit-tsoko</i>
1PI	<i>khlo:-sir-i</i>	<i>khlo:-sit-dj</i>
1PE	<i>khlo:-sin-ku</i>	<i>khlo:-sit-toko</i>
2SG	<i>khlo:-si-na</i>	<i>khlo:-sit-na</i>
2DU	<i>khlo:-si-tsi</i>	<i>khlo:-sit-tsi</i>
2PL	<i>khlo:-si-ni</i>	<i>khlo:-sit-ni</i>
3SG	<i>khlo:-si</i>	<i>khlo:-sit-dq</i>
3DU	<i>khlo:-si-tsi</i>	<i>khlo:-sit-tsi</i>
3PL	<i>khlo:-si-mi</i>	<i>khlo:-si-mri</i>

Table 3: Paradigm for verb *semu*, ‘fart’, with *-s* only surfacing in forms in grey cells

	NPST	PST
1SG	<i>se-ŋu</i>	<i>se-ŋro</i>
1DI	<i>se-tsi</i>	<i>se-ttsi</i>
1DE	<i>se-tsuku</i>	<i>se-ttsoko</i>
1PI	<i>ses-i</i>	<i>ses-ti</i>
1PE	<i>se-ku</i>	<i>se-ttoko</i>
2SG	<i>se-na</i>	<i>se-nna</i>
2DU	<i>se-tsi</i>	<i>se-ttsi</i>
2PL	<i>se-ni</i>	<i>se-nni</i>
3SG	<i>se</i>	<i>ses-ta</i>
3DU	<i>se-tsi</i>	<i>se-ttsi</i>
3PL	<i>se-mi</i>	<i>se-mri</i>

However, because the productive reflexive voice marker is optionally phonologically reduced to *-s*, this sometimes leads to identical forms between the paradigms of reflexively-marked verbs and the s-stem class verbs of Table 3, namely

in the 1PI and 3SG forms. An example of the variant form of the reflexive voice marker is seen in (9) above: instead of the expected *sen-sit-də* [kill-REFL-3SG.PST], we have *sensta*. While this form may look like it belongs to a paradigm such as that in Table 3, it is in fact a variant form of an otherwise well-behaved reflexively-derived verb. (For more detailed discussion, see Lahaussois 2011, 2016).

3.2 Other uses of the reflexive voice marker

The reflexive voice marker has a number of other uses: it can also mark reciprocal, middle, antipassive and anticausative functions. I retain REFL as a gloss for the marker across its different uses, as an indication of what I consider to be the core function.

With a reciprocal function, the utterance must contain a non-singular subject (as in 12). Semantics is important to interpretation; in (13), without the reduplicated emphatic nominal, the utterance would be ambiguous as to a reciprocal vs a reflexive interpretation (which would be something like ‘twist themselves up’).

- (12) *mər-tsip mamtha phwa-sit-tsi*
that-DU last.year separate-REFL-3DU.PST
'They separated last year.'
- (13) *məmim twap-twap bal-si-mi*
3PL self-RED wind-REFL-3PL
'They are tangled together.'

Example (13) can be contrasted with (14), which features a reflexive form of the same verb.

- (14) *memlo u-lə-dra u-mam-ku sem*
then 3SG₂.POSS-tooth-LOC 3SG₁.POSS-mother-GEN hair
bal-sik-pa mini-ka lwas-tə ʔe
wind-REFL-ACT.PTCP human₁-ERG see-3SG₁>3SG.PST HS
'Then the human₁ saw his₁ mother's hair that had wound itself around
his₂ tooth.'

The line between a reflexive and a middle interpretation can be a fine one, but the following examples are of “situations where there is no clear distinction between the ‘doer’ and the one ‘being done to’” (LaPolla 2003: 36); see also Kemmer 1993: §3), and are considered middles. Example (15) illustrates non-translational motion, (16) of change in body posture.

- (15) *a-rəm nə-ra-ma go ki-si-ŋro*
 1SG.POSS-body hurt-3SG.PST-CONJ 1SG pull.tight-REFL-1SG.PST
 ‘My body hurt and I stretched.’
- (16) *lamtsoko-ra tsəttsə-mim ther-si-mri*
 door-LOC child-PLU lean-REFL-3PL.PST
 ‘The children were leaning on the door.’

With an antipassive use, the patient argument of the underived sentence becomes an oblique argument, a fact which is reflected in the case markers it takes on after derivation: comitative *-nuŋ* or ablative *-ram* (17b), or locative *-ra* (18b). In the underived examples with the same base verbs in (17a) and (18a), *go* and *mandir* are patient arguments. The change in case-marking is accompanied by a change in the indexes on the verb, which are intransitive, indexing the S, after derivation.

- (17) a. *gu-ka go-lai għram-ŋi*
 3SG-ERG 1SG-DAT feel.disgust-3SG>1SG
 ‘He is disgusted by me.’
- b. *gumi bira-nuŋ/-ram għram-si-mi*
 3PL leech-COM/-ABL feel.disgust-REFL-3PL
 ‘They are disgusted by leeches.’
- (18) a. *gu-ka mandir khir-#*
 3SG-ERG temple circumambulate-3SG>3SG
 ‘He circles the temple.’
- b. *gu mandir-ra khir-si*
 3SG temple-LOC circumambulate-REFL.3SG
 ‘He circles around at the temple.’

When there is no clear external cause for the action, an anticausative interpretation results. This is the case with the reflexive-marked verb in (19).

- (19) *dʌksa tsar-sit-də*
 tree make.fall-REFL-3SG.PST
 ‘The tree fell.’

3.3 Reflexive or emphatic nominal?

While the primary reflexivization strategy in Thulung is clearly verbal, the language has an emphatic nominal, *twak* or *twap*, which is optionally used in some reflexive constructions, as in (20).

- (20) (*u-twap ts*λi**) *th*λ*-s-ta*
 (3SG.POSS-self CONTR) hide-REFL-3SG.PST
 'He hid (himself).'

This nominal, which can be translated as 'self', often takes possessive indexes, as in the following paradigm (Table 4).

Table 4: Emphatic nominal paradigm (possessive pronoun + 'self')

	SG	DU	PL
1	<i>a-twap</i>	<i>atsi-twap</i> (incl.)	<i>aki-twap</i> (excl.)
		<i>itsi-twap</i> (excl.)	<i>iki-twap</i> (incl.)
2	<i>i-twap</i>	<i>itsi-twap</i>	<i>ini-twap</i>
3	<i>u-twap</i>	<i>utsi-twap</i>	<i>uni-twap</i>

There is an additional set of adnominal possession markers: the possessive indexes in Table 4 combine with a nominalizer *-ma*, generating a full set with person/number/clusivity contrasts; these nominalized forms are used attributively, preceding the noun they modify. We thus have *ama tswap* [1SG.POSS self] 'my self' as well as *a-twap* [1SG.POSS-self] 'myself' used interchangeably.

Emphatic nominals are not obligatory with most reflexive constructions, and are often found in scenarios where there is no coreference, as in (21):

- (21) *u-twak-ka dwak-*u*-m-num bia bo-m-sa-mu*
 3SG.POSS-self-ERG like-3SG>3SG.NMLZ-COM marriage do-INF-APPL-INF
 'They should marry her to someone she herself likes.'

Nonetheless, in certain reflexive-voice-marked scenarios, the emphatic nominal can be used as well. This is the case with (22) below.

- (22) *me k*λ*ls-ram ku-ka twap pr*λ*n-si-mu ba:si*
 DEM Kales-ABL water-INS self sprinkle-REFL-INF must
 'Each person must sprinkle himself with water from the Kales.'

4 Coreference with different verb types

This section explores the expression of coreference with different verb types: body care and grooming verbs (§4.1), and extroverted verbs (§4.2).

4.1 Body care/grooming verbs

Verbs of grooming and body care can be divided into those affecting only part of the body and those affecting the whole body.

Body-part actions can be expressed either by means of reflexivized verbs or transitive constructions. Example (23) illustrates two body-part actions expressed through reflexivized verbs.

- (23) *hur-si-ri-mim tsʌŋra bui-dʌ:la tel-ka kłɔ:-si-mu ba:si*
wash.head-REFL-1PI-NMLZ after head-on oil-INS apply-REFL-INF must
'After we wash our hair, we must apply oil [to our heads].'

Transitive constructions, with the object possessively marked or not, can also be used. Example (24) illustrates this alternative construction with the same (first) verb as in (23).

- (24) *go a-sem hur-pu-ma düt-pu*
1SG 1SG.POSS-hair wash-1SG>3SG CONJ comb.hair-1SG>3SG
'I wash my hair and comb it.'

Example (25) shows a transitive construction used for a body-part action, without possessive marking on the body part; the equivalent whole-body action can be seen in (7), with obligatory reflexive voice marking.

- (25) *go lwa dzemka sel-pu*
1SG hand carefully wash-1SG>3SG
'I wash my hands carefully.'

Thulung also expresses some body-part actions through the following dependent verbs (as per Kemmer 1993: 22), for which no base verb currently exists: *hi:simu* 'turn body or head', *khusimu* 'wear on head', *khlusimu* 'wear on feet'.

Whole-body actions, typically dressing and bathing, are always reflexively marked, as illustrated in examples (26–28).

- (26) *to:si-ra tshəm-ra lʌ:-mu-lai bwapme-mim tshəm blwa-sit-miri*
Tosi.festival-LOC dance-LOC go-INF-DAT housewife-PLU much
dress.up-REFL-3PL.PST
'To go to dance at Tosi, the housewives dressed themselves up a lot.'

- (27) *mu:su ku-gui plum-sit-da*
 buffalo water-into immerse-REFL-3SG.PST
 ‘The buffalo immersed itself in the water.’
- (28) *go nepsun-ra blay-siy-ro*
 1SG sun-LOC dry-REFL-1SG.PST
 ‘I dried myself in the sun.’

4.2 Extroverted verbs

With reflexivized extroverted verbs (“those which denote an action typically performed on others”, Haiman 1998: 73), subjects are nominative case-marked and verbs take intransitive indexes and are reflexively marked. Additionally, they tend to include the emphatic nominal, as seen in (29), as well as in (9), which includes another extroverted verb.

- (29) *khlea u-twap-ya khren-si*
 dog 3SG.POSS-self-INT bite-REFL.3SG
 ‘The dog bites itself.’ (elicited)

5 Coreference of subject with different semantic roles

5.1 Possessors

Thulung uses the same coding system for possessors, whether or not there is coreference between the subject and the possessor: possession is marked with a possessive index on the possessed noun and/or a genitive case marker on the possessor.⁵

Examples (30–31) illustrate the same adnominal possession marking (prefix *u-*, for 3SG.POSS) used to mark possession which is coreferential with the subject (in the first occurrence in each sentence), and coreferential with the patient (in the second occurrence in each sentence). This shows quite clearly that Thulung has no special adnominal possessor form for coreference with the subject.

⁵This yields the following possibilities:

- (i) *mam-ku (u-)khel*
 mother-GEN (3SG.POSS-)leg
 ‘mother’s (her-)leg’

- (30) *u-bʌdzʌi-lai* *thon-kot-dtu* *?e me thʌŋki-ka*
 3SG₁.POSS-grandmother-DAT IDEO-spray-3SG₁>3SG₂.PST HS DEM resin-INS
 u-kʌl-bʌri
 3SG₂.POSS-face-all.over
 ‘He sprayed his grandmother suddenly with resin, all over her face.’

The first instance of *u-* (*u-bʌdzai* ‘his grandmother’) is coreferential with the subject (not overtly expressed, but present in the discourse and indexed on the verb), whereas the second (*u-kʌl*, 3SG.POSS-face) refers instead to the grandmother as possessor, and is thus coreferential with the object. The coreference is indicated with subscript numbers in the glosses.

A similar situation is found in (31), although it is made up of two sequential utterances:

- (31) *me u-khel* *tsʌi hoŋka dʌs-tu* *?e me*
 DEM 3SG₁.POSS-leg CONTR like.this move-3SG₁>3SG.PST HS DEM
 khola-go-ju *tsobethat-dtu* *?e ; me yo-ka ne me*
 river-inside-LOW.LOC dip-3SG₁>3SG.PST HS ; DEM fish-ERG TOP DEM
 u-khel *khret-da get-da* *retsʌ ?e*
 3SG₁.POSS-leg bite-PURP come-3SG₂.PST it.seems HS
 ‘He moved his legs like this, he dipped them into the river, and that fish
 came to bite his legs.’

The two relevant possessed nouns in (31) are the two occurrences of *khel* ‘leg’: the first occurrence is coreferential with the (unexpressed, but indexed on the verb) subject of the verb *dʌsttu*; in the second occurrence, the subject is the (overtly expressed and ergative-marked) *yo* ‘fish’, and there is no coreference between the subject and the possessor of *khel* ‘leg’.

It might be suspected that the possession of body parts and kin terms in (30) and (31) potentially has an impact on the possessive index, but this is not the case: in (32), *u-* alone marks possession by the subject of the utterance.

- (32) *u-ta:rbar* *khjarjarjarja thut-to jok-ta* *?e*
 3SG₁.POSS-machete scraping.sound pull-SIM.CVB go.down-3SG₁.PST HS
 ‘He went down, pulling his machete with a scraping sound.’

In situations where coreference between the subject and possessor must be definitively established, the emphatic nominal *twap* is used, in which case no ambiguity remains. Thus while (33) can be used for both situations with coreference and disjoint reference between the subject pronoun and the nominal adpossessor, (34) can only be interpreted as coreferential.

- (33) *gu-ka uma khe:sa set-d_H*
 3SG₁-ERG 3SG_{1/2}.POSS lover kill-3SG>3SG.PST
 ‘She₁ killed her_{1/2} lover.’
- (34) *gu-ka uma twak-ku khe:sa set-d_H*
 3SG₁-ERG 3SG₁.POSS self-GEN lover kill-3SG₁>3SG.PST
 ‘She killed her own lover.’

The coding of possessors is also relevant to the expression of coreference between two non-subject arguments of a single clause: because there is no special possessive marker for coreference, such situations are also potentially ambiguous (and can be disambiguated using an emphatic nominal), as in (35).

- (35) *jelunj-ka bala-nuj uma (twak-ku) du:tham se-ur_H*
 Jelunj-ERG Bala-COM 3SG.POSS (self-GEN) about tell-3SG>3SG.PST
 ‘Yelung told Bala about herself.’

5.2 Beneficiaries

Coreference between agent and beneficiary (which I have referred to as ‘auto-benefactive’ elsewhere; Lahaussois 2016; Jacques et al. 2016) is also expressed through reflexive voice marking on the verb. This is illustrated in (36–37).

- (36) *go a-khe:sa mal-si-ŋro*
 1SG 1SG.POSS-lover search-REFL-1SG.PST
 ‘I searched for a lover for myself.’
- (37) *go ama la:gi ko:-le humje bhre-ŋ-si-ŋro*
 1SG 1SG.POSS sake one-CL shawl buy-1SG-REFL-1SG.PST
 ‘I bought myself a shawl.’

The phrase *ama la:gi* ‘for my sake’ in (37) functions here like an emphatic, but is by no means necessary for the expression of coreference. Note that it is a strategy for introducing a beneficiary in cases of non-coreference as well.

When the beneficiary is not coreferential with the agent, the additional non-agentive argument is usually brought into the argument structure through an applicative marker on the verb; the indexes on the verb are for the agent and the beneficiary argument. There are a few options to mark the beneficiary: dative marker *-lai* (used for primary objects) as in (38), with the phrase *-ku/-kam la:gi*, ‘for the sake of’, where the beneficiary is the possessor, or through possessive marking on the theme, as in (39).

- (38) *gu-ka lwak-lai phadzi bubre-sat-dt*
3SG-ERG younger.sibling-DAT bag buy-APPL-3SG>3SG.PST
'He bought a bag for his brother.'
- (39) *uma sʌŋ phar-sat-toko*
3SG.POSS wood collectively.cut-APPL-1PE>3SG
'We collectively cut his wood for him.'

Verbs which are not applicative-marked are also found, however, and use the same strategies for coding the beneficiary, as in (40) where both the applicativized and non-applicativized forms are found to be acceptable.

- (40) *mam-ka tsəttsə-lai dzam khok-sa-mri/khok-tt*
mother-ERG child-DAT rice cook-APPL-3PL>3SG.PST/cook-3SG>3SG.PST
'Mother cooked rice for the child.'

5.3 Recipients

The expression of coreference between an agent and a recipient appears to be quite unnatural in Thulung. Utterances can be produced during elicitation, but my corpus does not contain a single one spontaneously produced example.

Example (41a) is contrasted with an equivalent example without subject-recipient coreference in (41b).

- (41) a. *mesem u-twap upʌhar gwa:-si*
girl 3SG.POSS-self gift give-REFL.3SG
'The girl gives herself a present.' (elicited)
- b. *mesem-ka nɔpsə-lai upʌhar gwak-tt*
girl-ERG friend-DAT present give-3SG>3SG
'The girl gives her friend a present.'

In (41a), the verb is detransitivized with *-sit*, as expected, and takes intransitive 3SG indexation, and the agent and recipient (expressed overtly through the emphatic nominal) take nominative case-marking, as they would in an intransitive scenario. Yet while sentences expressing coreference between a subject and a recipient are able to be produced in elicitation, in some cases they involve ergative-marked subjects with reflexivized verbs, and thus appear to be marginal.

6 Exact vs partial coreference

In partial coreference, there is incomplete overlap between the agent and patient, a situation brought about when the reference involves a first or second person and one of the arguments encompasses a larger set than the other (“I see us”; “we (incl.) see you”). Because the main strategy for establishing agent-patient coreference in Thulung is the use of the reflexive voice marker, entailing detransitivization and the use of intransitive indexes, the expression of partial coreference is not possible: partial coreference would need to index both arguments, something that cannot be done with intransitive indexes.

While some ditransitive verbs may look like they express partial coreference, this is in fact the result of the verb in question being an indirective and indexing A and T (rather than R, as in secundative verbs). This is seen in (42), in which the verb indexes the subject [1SG] and *dzam* [3SG] meaning ‘food’, and not the recipient [1DI].

- (42) *go gutsi-lai dzam phet-pu*
 1SG 1DI-DAT food serve-1SG>3SG
 ‘I will serve us (incl.) both food.’

Attempts at eliciting situations involving partial coreference result in a number of strategies:

- a. altering the scenario to involve exact coreference (as in 43–44):⁶

- (43) *gutsi ko:-le-ŋa je hum-sin-tsi*
 1DI one-CL-INT cloth wrap-REFL-1DI
 ‘We wrap ourselves in the same blanket.’ [intended: Wrap us (incl.) in the same blanket]
- (44) *gutsi chatta-ka rim-sin-tsi*
 1DI umbrella-INS cover-REFL-1DI
 ‘We cover ourselves with the umbrella.’ [intended: You cover us (incl.) with the umbrella]

- b. using a semantically-related intransitive to express the intended scenario (as in 45):

⁶Examples (43–44) were inspired by examples provided in Bickel et al. (2010).

- (45) *gana me-dzøpa ga:ri then-na-ma:la gui si-i*
2SG NEG-good car drive-2SG>3SG-COND 1PI die-1PI
'If you drive the car badly, we will die.' [intended: You will kill us
(incl.) all (scenario: driver driving dangerously)]

c. paraphrasing the scenario (as in 46):

- (46) *gana go-lai wakha lamdi-bet-ŋi*
2SG 1SG-DAT slow walk-CAUS-2SG>1SG.PST
'You made me walk slowly.' [intended: you slowed us (incl.) down
(by walking slowly)]

The examples above, illustrating Thulung strategies for solving problems of partial coreference, show that the language can only express exact coreference (reflexive voice marking and intransitive indexes) or completely disjoint reference (transitive indexes and appropriate case-marking for distinct argument roles).

7 Long-distance coreference

Thulung uses direct speech as a means of embedding any quoted material, and this applies both to speech and to thinking. As a result, the establishment of coreference of the subject across clauses does not need to be expressed in such complement clauses: a 1st person form of a verb within the direct speech clause establishes coreference (see 47–48); any other person expresses disjoint reference in utterances. For a similar situation in Chantyal, see Noonan (2006).

- (47) *go mi-bi-ŋu rwak-ta*
1SG NEG-come-1SG say-3SG.PST
'He said he wouldn't come.' [lit. He said "I won't come."]
- (48) *gu-ka ne set-to rwak-pa mim-ɖu-m ba-ira*
3SG-ERG TOP kill-1SG>3SG.PST say-ACT.PTCP think-3SG>3SG.PST-NMLZ
be-PST
'She had thought she killed him.' [lit. She had thought, saying "I killed
him."]

These examples can be contrasted with a scenario (in 49) where the use of non-1st person marking in the embedded clause firmly establishes disjoint reference between the subjects of the two clauses.

- (49) [me:sem u-lwak ne set-d^u] wosts^ø
 female 3SG.POSS-younger.sibling TOP kill-3SG>3SG.PST male
 u-wa:-ka mem rwak-ta-m
 3SG.POSS-older.sibling-ERG DEM say-3SG.PST-NMLZ
 ‘The older brother thought that she [an ogre] had killed his younger sister.’ [lit. “She killed my younger sister” said the older brother.]

8 Conclusions

Thulung has a primary strategy for establishing agent-patient coreference: the use of a reflexive voice marker *-sit*. Its use on a verb triggers intransitive subject indexes and nominative case-marking on the subject. In addition to reflexivity, the reflexive voice marker is used to mark reciprocity, middle scenarios, antipas-sives and anticausatives.

A possessive indexed emphatic nominal can be optionally used to reinforce the expression of coreference. The use of the emphatic nominal is notably found in situations where coreference cannot be established by means of any specialized markers, such as with the marking of possession: adnominal possessive indexes are neutral as to coreference or disjoint reference with other arguments. One also finds the emphatic nominal in sentences with extroverted verbs, suggesting that such situation types require additional coding of the coreference. It is also possible that Thulung is undergoing change with respect to its reflexive-voice-only strategy, and that the use of the emphatic nominal is on the rise, under the influence of Nepali.

Additional interesting features of Thulung are the impossibility of marking partial coreference, and the fact that the language’s embedding of direct speech makes the marking of coreference across complement clauses unnecessary.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ACT.PTCP	active participle	INT	intensifier
CL	classifier	LOW.LOC	low-locative
CONJ	conjunction	PE	plural exclusive
CONTR	contrastive focus	PI	plural inclusive
DE	dual exclusive	PLU	nominal pluralizer
DEM	demonstrative (distal)	RED	reduplication
DEM.PROX	proximal demonstrative	SIM.CVB	simultaneous converb
DI	dual inclusive	TEMP	temporal
HS	hearsay		

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Chapter 13

Reflexive constructions in Early Vedic

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This chapter addresses the diverse reflexive constructions and related functions found in Early Vedic, the earliest attested Indo-Aryan language of the Indo-European family. In particular, we analyze constructions with the middle voice, the nominal strategy *tanú-*, and the reflexive adjective *svá-*. Furthermore, we suggest different diachronic pathways that may explain the historical development of the system synchronically developed here.

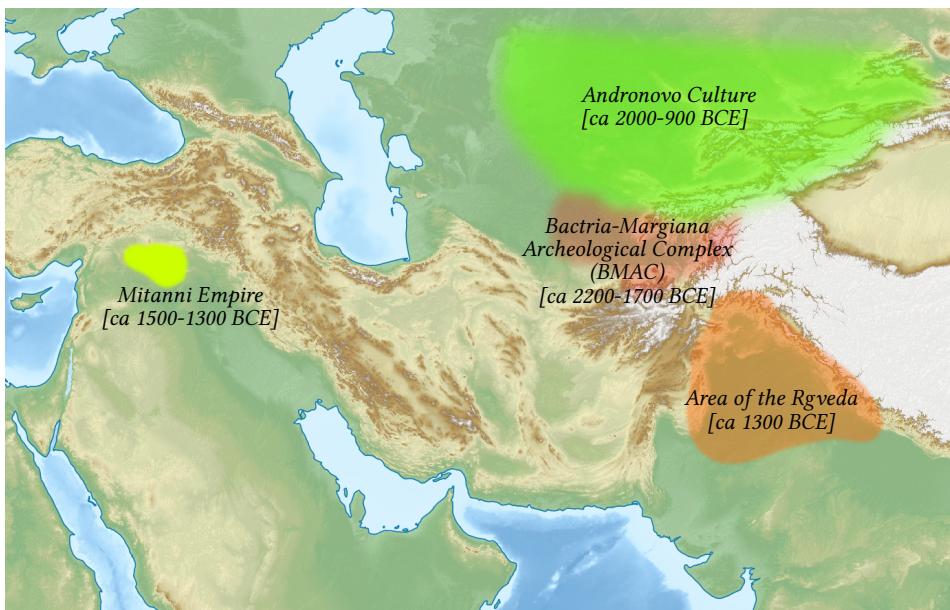
1 Introduction

1.1 Vedic and Early Vedic

Vedic (or Vedic Sanskrit) is the earliest attested Indo-Aryan language of the Indo-Iranian (or Indo-Iranic) branch of the Indo-European family. It was spoken from the mid-2nd millennium BCE through to the beginning of the 1st millennium BCE, within the area of today's Afghanistan, northern Pakistan and northern India (Witzel 2006: 160), see Figure 1.

Vedic is attested in the oldest religious texts of Hinduism and Sanskrit literature, the *Samhitās* ‘collections’: *R̥gveda-Samhitā* (RV), *Sāmaveda-Samhitā*, *Black (kr̥ṣṇa)* and *White (śukla)* *Yajurveda-Samhitā* (YV), and *Atharvaveda-Samhitā* (AV). The texts were composed for the ritual recitation of sacred poetic formulas (*mantrās*) with fixed metrical structures alongside parts in prose; they were memorized and verbally transmitted with astonishingly high fidelity by oral tradition across generations up to the present day, preserved in several recensions





Based on https://commons.wikimedia.org/wiki/File:Middle_East_topographic_map.png CC-BY-SA 4.0
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Figure 1: Geographical distribution of speakers of Early Vedic

or ‘schools’ (*sākhās* ‘branches’, e.g. AV of the *Paippalāda-Śākhā*). Their written fixation and canonization was subsequent to the ongoing process of their creation and continual re-arrangements within the oral transmission.

Given a timescale of roughly 1000 years, it is difficult to speak of a homogeneous language. Therefore, diverse labels are used to differentiate historical varieties: Early Vedic, Old Vedic, Late Vedic.¹ Early Vedic (henceforth, EV) is the language of the core of the *Rgveda-Samhitā*, especially the language of the “family books” (Māṇḍalas 2-7) and RV 1.51-191, 8.1-66 (Oldenberg 1909 [1912]), and presumably several parts of RV 9, which is a later compilation of hymns. Although it is not possible to date these phases with complete accuracy, the earliest sections (RV 5) may have been composed by people who spoke the language in everyday life around 1400 BCE (Witzel 1989: 124–127, Witzel 1997). The term “Late Early Vedic” refers to the language of RV 1.1-50, 8.67-103, and RV 10.

This is a corpus-based investigation and the focus of this paper is on the language of the RV, which most likely corresponds to the period in which Early

¹“Old Vedic” is the language of the Mantra period, subsequent to Early Vedic, and datable to ca. 1150 BC with the beginning of the Iron Age (Witzel 1997: 280). It is followed by “Late Vedic”.

Vedic was spoken. The topics that are covered in this paper are mapped following the general lines proposed by Janic & Haspelmath (2023 [this volume]). The structure of this paper is as follows: in the rest of this first section, we offer an overview of the language under investigation and some relevant remarks about its grammar. In §2, we analyze the diverse strategies for reflexive marking: verbal (§2.1), head noun (§2.2) and adjunct auto-possessive (§2.3). In each of these sections, we further offer an overview of the different values associated with those strategies. We express our conclusions in §3.

1.2 General remarks on Early Vedic grammar

Vedic has fusional morphotaxis with cumulative exponence of grammatical categories. The dominant marking strategy is suffixation; partial reduplication is frequent with verbs (e.g. perfect active *ca-cákṣ-^a* ‘[he/she/it] has seen [him/her/it]’, from $\sqrt{cakṣ}$).² The fusional marking strategy includes portmanteau suffixes (“endings”) for person, number, TAM, voice (see below), or case, number, gender, e.g. [ACC.SG.F] -am of *vāc-am* (Patient, Theme or Goal) from *vāk* (*vāc-*) ‘speech’. There is a high degree of stem variation, including root and stem suppletion (e.g. *purú-* [ADJ.M.N] ‘much, many’ vs. *pūrvī-* [ADJ.F], and root and/or stem ablaut with multiple morph variants (e.g. $\sqrt{han-}/ghn-/ghan-/ghāñ-/ja-$ ‘to slay, kill’). Several diachronically innovative roots lack ablaut (e.g. 3SG Xth present indicative active *cakṣáyati* from *cakṣ-* ‘to see’). Verbs and pronouns may show root suppletion, the former depending on TAM, e.g. perfective *á-vadh-īt*, ($\sqrt{vadh-}$ ‘to slay, kill’) vs. imperfective *hán-ti* ($\sqrt{han-}$ ‘to slay, kill’); the latter depending on case, e.g. anaphoric pronouns *sá-s* [NOM.M] vs. *tá-m* [ACC.M].

Verbs inflect via endings that encode simultaneously person (1, 2, 3), number (SG, DU, PL), voice (active vs. middle), and TAM distinctions. Present tense is only coded by endings, e.g. [3SG.PRS.ACT] -ti of *hán-ti* ‘[he/she/it] is slaying [him/her/it/them]’ or middle -te of *jíghna-te*. Past tense is coded by the prefix á- combined with endings (e.g. *á-vadh-īt*, *á-han* ‘[he/she/it] slew, killed [him/her/it/them]’). Future tense is coded by a tense stem, e.g. *haniṣyá-^{t(i)}* ‘will slay, kill’, which is rare in Early Vedic, future tense being more often coded

²In §1, we follow the conventions of Vedic philology by giving the 3SG form of verbs as citation form, and by hyphenating the stem (e.g. *ca-cákṣ-*). The 3SG ending suffix is given as a superscript when not illustrative. The symbol $\sqrt{}$ is used to cite the root. The traditional category “present” is rather an imperfective aspect plus present tense. “Present stems” (that is, imperfective stems) are traditionally numbered from Ist through Xth. For the sake of space, examples are translated but left unglossed in this section. In general, we follow the Leipzig glossing rules (see the Abbreviations section at the end for gloss abbreviations). Morphs are not segmented unless absolutely necessary to follow the argumentation in the paper.

by the subjunctive-future stem. Coding of mood is by endings (e.g. indicative 3SG *hán-ti*, *jíghna-te*, imperative 2SG *ja-hí*, 3SG *hán-tu*) or by the use of modal stems, e.g. “subjunctive” *hána^{-ti}(i)* (exhibiting subjunctive-future polyfunctional-ity), optative *hanyā^{-t}*, desiderative-conative *jíghāmsa^{-ti}*. There is an archaic non-tensed category called the “injunctive”, e.g. *hán* ‘[he/she/it] slew, slays, will slay [it/him/her/them]’, underspecified for tense and non-irrealis modal distinctions. Verbs inflect for aspect via varying stems, following a “root and pattern” stem formation principle (Pooth 2014: 113ff.): imperfective (traditionally called “present stem”) *hán^{-ti}*, intensive I *jáñghan^{-ti}*, intensive II *ghánighn-ant-* (participle), perfective (traditionally called “aorist stem”) *á-vadh^{-it}*, anterior (traditionally called “perfect stem”) *jaghán^{-a}*.

Nouns and adjectives (e.g. *kṛṣṇa-* m. ‘blackbuck, *Antilope cervicapra*’, *kṛṣṇá-* adj. ‘black’) inflect for three genders (feminine, masculine, and neuter), three numbers (singular, dual, plural), and eight cases (nominative, accusative, instrumental, dative, ablative, genitive, locative, vocative). Nouns have lexical gender. Adjectives generally inflect like nouns but for all three genders.

Vedic alignment is of the nominative-accusative type. The nominative typically encodes A = S, while the accusative encodes P (patient), T (theme), G (goal), and even R (recipient); alternations of accusative G and R with dative and locative are not infrequent. The instrumental may express the oblique agent of passive constructions. Vedic lacks the valency relation of necessary complementation (Pooth 2014: 281–301); all arguments can be pragmatically non-overt and covert. Vedic word order is basically discourse-configurational. Noun phrases can be discontinuous.

2 Reflexivizers in Early Vedic

Early Vedic lacks a prototypical reflexive pronoun, but has diverse strategies for coreference of arguments within the minimal clause.³ Following the cross-linguistic classification of Faltz (1977), these are basically the middle voice and a head noun strategy featuring: *tanú-* ‘body’. There is also a complex strategy with the adposessive *svá-* (+ noun), used mostly for partial coreference. Early Vedic also has an elaborate system of personal pronouns (1st and 2nd person singular, dual, plural) and demonstrative pronouns (3rd person singular, dual, plu-

³To our knowledge, a thorough study on Vedic long-distance reflexives is still lacking. As in other ancient Indo-European languages, a dedicated long-distance reflexive is absent. It seems possible that the demonstrative pronoun *sá-* may be used in some cases. Further study on this topic is still needed.

ral), which when used in the genitive case (e.g. *máma* [1SG.GEN], *táva* [2SG.GEN]), encode both coreferential and disjoint possession.⁴

2.1 Verbal reflexivizers

2.1.1 General remarks on the Early Vedic middle voice and its polysemy

In EV, middle inflection is polyfunctional:⁵ following the terminology of Haspelmath (2023 [this volume]) its functions include autopathic (i.e. direct reflexive), as the first 3PL form in (1),⁶ autobenefactive, as in (2), autoreceptive/autodirected, as in (3), or auto-possessive (reflexive possessive), as in (4).⁷ The subject (mainly nominative) is either beneficiary, recipient/goal, or possessor:

- (1) *añjáte* *vy* *añjate* *sám* *añjate*
anoint.3PL.PRS.MID RECP anoint.3PL.PRS.MID together anoint.3PL.PRS.MID
'They anoint themselves, they anoint each other, together they anoint each other' (RV 9.86.43a)
- (2) *yáje* *tám*
worship.1SG.PRS.IND.MID DEM.ACC
'I worship him for my benefit' (RV 2.9.3c)
- (3) *á* *devó* *dade...* *vásūni*
(t)hither god.NOM.SG give/take/receive.3SG.PF.IND.MID good.ACC.PL
'The god has taken the goods to/for himself' (RV 7.6.7a)
- (4) *úc chukrám* *átkam* *ajate*
out bright.ACC.SG garment.ACC.SG drive.3SG.PRS.IND.MID
'He pulls out his (own) bright garment' (RV 1.95.7c)

With plural subjects, middle inflection can show corresponding reciprocal meanings: recipropathic (in the spirit of the “autopathic” term, coined by Haspelmath (2023 [this volume])), as illustrated by the second 3PL form in example

⁴There are also possessive pronominal adjectives (e.g. *mámaka-* ‘my’), but these are rare in Early Vedic (Macdonell 1910: 305).

⁵The high degree of polysemy and lability in EV middle forms strengthens the hypothesis that the Vedic middle more generally goes back to a Proto-Indo-European “off-valency-processing” detransitivizing category (Pooth 2014).

⁶All translations are our own, unless explicitly stated.

⁷We prefer the labels “recipropathic” and “auto-possessive”, as these terms show with greater accuracy that these are different functions and that they belong to a complex net of connected functions (autopathic, autobenefactive, recipro-possessive, etc.).

(1) (often with the particle *ví* as an additional marker; Kulikov 2007a), recipro-benefactive ('for each other's benefit'), recipro-receptive/amphi-directed ('to each other'), recipro-possessive ('each other's ACC'). With plural subjects, middle inflection also encodes joint action ('together with each other'), as in (5), often additionally encoded by the particle *sám* 'together':

- (5) *sám áyanta á dísah*
 together go.3PL.PRS.IND/SUBJ.MID (t)hither direction.ACC.PL
 'They (will) go together in all directions' (RV 1.119.2b)

Moreover, middle inflection can encode an indefinite Agent, as in (6), and can even have a passive function with an optional oblique Agent (normally in the instrumental case), as in (7).

- (6) *yáthā vidé*
 like know.3SG.PRS/PF.IND.MID
 'As (is) known' (RV 1.127.4a)

- (7) *tvayā yát stavante... vīrāś*
 2SG.INS when praise.3PL.PRS.IND/SUBJ.MID man.NOM.PL
 'When - by you (oblique agent) - the men are praised' (RV 6.26.7c)

Middle inflection is often lexicalized with experiencer-stimulus verbs, verbs of sentience and cognition (e.g. *mányate* 'to think something, think of someone'), emotive speech, motion, change in body posture, states (e.g. *āste* 'to sit, sit down'). This conforms to a well-known middle marking pattern (Kemmer 1993).⁸ Lexicalized middle inflection allows *man-* 'to think' to be used in a predicative reflexive construction, as in (8):

- (8) *mánye reván iva*
 think.1SG.PRS.MID wealthy.NOM.SG as
 'I think of myself as a wealthy man' (RV 8.48.6cd)

In a few cases, middle inflection indicates that the accusative is a non-affected goal, whereas corresponding active forms indicate that the accusative is an affected patient, e.g. middle *jíhite* 'to go away to someone [ACC], to give way to someone [ACC]' vs. active *jáhāti* 'to leave someone [ACC] behind' (Pooth 2014:

⁸Middle inflection is also lexicalized with verbs indicating a lower degree of control, e.g. *pard-* 'to fart' (**párdate* is not attested in the earliest texts but can be reconstructed based on Classical Sanskrit *pardate*; see Pooth 2014).

154ff.). The distinction of active *yé tvām ... pádyanti* ‘who are stepping forward to you’ (RVKhil 4.2.7a) vs. *pádyate, ápādi* ‘to fall down’ (*pad-*) seems to reflect an agentive active vs. non-agentive middle opposition.

When judged from its entire functional scope, the EV middle voice category is “off-valency-detransitivizing” (Pooth 2014). This implies that it is *not necessarily* a valency-changing category, and that *per se* middle inflection does not *categorically* decrease the number of participants involved in the event, but can do so, and does, if such an interaction between verb stem and middle inflection is lexicalized.

As illustrated in (9), middles (e.g. 3PL *áranta/aranta*) can show labile syntactic and semantic behavior. They are used intransitively ('came together') or convey *indirect causative* meaning (where *indirect causative* means causing a change of state in P without direct physical contact or manipulation).

- (9) a. *sám... vām uśánā áranta deváḥ*
 together 2DU.ACC uśánā.INS meet.3PL.AOR.MID god.NOM.PL
 ‘The gods made you two come together with Uśanā’ (RV 5.31.8d)
- b. *sám... aranta párva*
 together meet.3PL.AOR.MID limb.NOM.PL
 ‘The limbs came together’ (RV 4.19.9d)

In (9a), the gods (*deváḥ*) cause a change of state in the 2DU, whereas the meaning of (9b) does not include causation ('the limbs' undergo a change of state). Active forms can also exhibit transitive/intransitive lability or similar kinds of polysemy, as in (10).

- (10) *táva bhāgásya trpnuhi*
 you.GEN.SG portion.GEN.SG sate.oneself/become.sated.2SG.IMP.ACT
 ‘Sate yourself/be/become sated from your portion!’ (RV 2.36.4cd)

The verb *trp-/tarp-* is stative-processual ‘to be/become sated’ but also allows an agentive reflexive meaning ‘to sate oneself, make oneself be saturated’.⁹

Thus, not all TAM stems and active vs. middle forms are equally specified for valency in EV. Transitive/intransitive lability vs. non-lability is licensed by a lexicalized interaction between the lexical meaning and the meaning of the

⁹The stem formation pattern with thematic PRS *tr̥mpá-*, thematic AOR *átrpa-*, PF.MID *tātrpur-*, participle *tātrpāná-* points to a preceding deponent verb (“proto-middle tantum”; Pooth 2014), as also indicated by the “middle-ish” polysemous semantics. The active-*-nu*-present forms seem to be innovative.

respective TAM stem formation vis-à-vis active vs. middle inflection (Pooth 2014). Consequently, the valency-decreasing function of middle inflection operates as a *lexicalized interaction* with TAM stems specified for valency, e.g. “present passive” stems like *pūyá-te* ‘is purified’ vs. active IXth “present” *punāti* ‘purifies someone [ACC]’ (Kulikov 2012; Pooth 2014).¹⁰ Various works have described typical lability introduced by special TAM formations, e.g. that of perfect active forms (Kümmel 2000), athematic middle -āna- participles, etc. (Kulikov 2014).

2.1.2 Verbal reflexive constructions in the autopathic domain

Autopathic reflexives set the coreference between subject and object. Such cases can be expressed by the middle voice in all kinds of clauses, and both with extroverted, as was seen in (1) above and also in (11a) below, and introverted events, as in (11b), according to Haiman’s (1983) terminology:

- (11) a. *prché* *tád* *éno* *varuṇa*
ask.1SG.IND.MID DEM.ACC.N sin.ACC.N Varuṇa.VOC
'I ask myself about that sin, o Varuṇa' (RV 7.86.3a)
- b. *uṣámāṇah* *úrñām*
clothe.PTCP.MID.NOM.SG wool.ACC.SG
'Clothing himself in wool' or 'Being clothed/dressed in wool' (RV
4.22.2c)

In autopathic reflexive constructions, the middle voice is an almost obligatory marking that can co-occur with the nominal strategy, as shown below in §2.2. There is a tendency to use middle inflection as a reflexivizing strategy without additional marking when a corresponding transitive active form exists, as is the case for the verb in (12), while otherwise the additional nominal marking strategy can be used.

¹⁰ A diachronic tendency to introduce the valency-changing function by narrowing active or middle forms of formerly labile verbs to either transitive or intransitive function is evident from the relation of active forms of archaic stems of motion verbs (e.g. ¹*r* ‘to rise, raise’) to corresponding active forms of innovative stems (Pooth 2012). The restriction of transitive valency to active forms of innovative present stems is also evident from active forms like *pínva-ti* vs. middle forms *pínva-te* of the verb *pinv-* ‘to swell’. Whereas active forms of the Ist present stem *pínva-* are restricted to transitive function (‘to swell someone’), corresponding middle forms are more dominantly intransitive (‘to swell’), although there are a few relics with indirect causative meaning. The narrowing of several middle forms to valency-decreasing function and the restriction of TAM stems to either transitive or intransitive valency is an ongoing innovative functional change within the EV language (Pooth 2014).

- (12) *táva* *śriyé* *marútaḥ* *marjayanta*
 you.GEN.SG splendour.DAT.SG marut.NOM.PL scrub.3PL.CAUS.MID
 ‘For your splendour, the Maruts scrubbed themselves’ (RV 5.3.3a)

As for introverted events, the EV verb stem *vás-te* is restricted to middle inflection, while the causative stem *vásáya-ti* can be active and transitive ‘to clothe someone (A acting on P)’. As illustrated in (11b), the middle participle *uṣamāṇa-* can be interpreted as the nucleus of a two-place structure with a P subject [NOM] and a theme [ACC], but it can also have a stative interpretation (‘is dressed/-clothed’). Thus, *váste* shows stative-dynamic polysemy ‘to be clothed in [ACC], to clothe oneself in [ACC]’. The reason why the autopathic reflexive reading in (11b) does not co-occur with a nominal strategy may be that *váste* is already a special “introverted verb stem” in EV.

2.2 Head noun reflexivizers

2.2.1 General remarks on *tanū-*

The feminine noun *tanū-* ‘body, person, self’ can be used in direct (in the accusative case) and indirect (in an oblique case) reflexive constructions, with an animate (and highly agentive) antecedent, as in (13):

- (13) *ágne* *yájasva* *tanvāṇi* *táva* *svām*
 agni.voc worship.2SG.IMP.MID self.ACC.SG your.SG own.ACC.SG
 ‘Agni, worship yourself’ (RV 6.11.2d)

However, *tanū-* is not a dedicated reflexivizer without lexical meaning, because it is not wholly grammaticalized as a reflexive marker (Pinault 2001; Orqueda 2019).¹¹ While many cases are ambiguous between a lexical and a reflexive interpretation, others display only a lexical interpretation, as the comparison between (14a) and (14b) shows:

- (14) a. *súrah* *upākē* *tanvāṇi* *dádhānah*
 sun.GEN.SG in.front.LOC.SG body/self.ACC.SG put.PRS.PTCP.MID.NOM.SG
 ‘Placing your body/yourself in front of the sun’ (RV 4.16.14a)
 b. *ásmā* *bhavatu* *nah* *tanūḥ*
 rock.NOM.SG be/become.3SG.IMP.ACT we.GEN.PL body.NOM.SG
 ‘Let our body be/become a rock’ (RV 6.75.12b)

¹¹The use of *tanū-* as a reflexivizer in Early Vedic illustrates a well-known cross-linguistic development of reflexives from body-nouns and body-part nouns, as shown by Schladt (2000), among others.

In ambiguous cases like (14a), only the context may help to disambiguate the polysemy (Pinault 2001; Kulikov 2007b). Both as a reflexivizer and as a lexical item, *tanú-* is far more frequent in the singular, although there are also some plurals and a few duals. Besides, as expected, the accusative case is most frequent, although there are also cases of coreference in the oblique domain, as in (18) below.

2.2.2 Head noun reflexive constructions with *tanú-*

As shown in §2.1, the middle voice is the primary reflexivizer in EV, so *tanú-* is mostly used as an additional mark of reflexivity to emphasize the reflexive interpretation, and this explains why practically all reflexive constructions with *tanú-* are also marked with the middle voice. However, there are no examples of *tanú-* with middle-marked and typically introverted events (e.g. *vas-* ‘to be clothed, clothe’). Besides, not all extroverted reflexives allow the addition of *tanú-*.

The reflexive strategy with *tanú-* can operate for all three persons and all three genders. The singular accusative with a singular referent is the most frequent structure, although it is also possible to find both a plural reflexivizer with a plural referent, as in (15) below, and a singular reflexivizer with a plural referent.

- (15) *yátra śúrāsaḥ tanvāḥ vitanvaté*
where brave.NOM.PL body/self.ACC.PL stretch.MID.PRS.3PL
'Where the brave ones/heroes stretch their bodies/themselves' (RV
6.46.12a)

The rarer cases of non-agreement are always ambiguous between a reflexive and a lexical interpretation, but they are worth noting as they explain the incomplete grammaticalization of this item. If *tanú-* had undergone complete grammaticalization as a reflexivizer, we could perhaps expect the loss of its declension and/or agreement, which is not the case.

In the autopathic domain, there is a tendency to use middle inflection as a reflexivizer without additional marking when middle forms have a transitive active counterpart within the same stem. Otherwise the additional nominal marking strategy is often used as a disambiguating device.¹² For instance, the present stem of *yaj-* ‘to worship’ can be used both as intransitive (without accusative)

¹²The high number of reflexive examples with an athematic middle participle (especially with the *-āna-* suffix) combined with *tanú-* is consistent with the idea that these participles are ambiguous between different interpretations, as already pointed out by Kulikov in various papers (e.g. Kulikov 2006).

and indirect causative, as in (16a); and it occurs with *tanú-* to reinforce the reflexive interpretation, as in (16b). In turn, (17) shows that a typically two-place verb form (a Xth causative stem) does not occur with an additional marker:

- (16) a. *yájasva hotar iśitáḥ*
 worship.2SG.IMP.MID priest.voc.SG sent.out.voc.SG
 yájīyān
 worshipper.voc.SG
 ‘Make (our offering) worshipped when prompted, O priest and
 worshipper!’ (RV 6.11.1a)
- b. *ágne yájasva tanvāṁ tāva svám*
 Agni.voc worship.2SG.IMP.MID self.ACC.SG you.GEN.SG own.voc.SG
 ‘Agni, worship yourself / your own body’ (RV 6.11.2d)
- (17) *tāva śriyé marútah marjayanta*
 you.GEN.SG splendour.DAT.SG marut.NOM.PL scrub.3PL.CAUS.MID
 ‘For your splendour, the Maruts scrubbed themselves’ (RV 5.3.3a)

Tanú- combined with the adposessive *svá-* can function as a complex compound reflexive, with no difference in meaning from constructions with *tanú-* and without *svá-*. Interestingly, a possessive pronoun or a genitive personal pronoun can also occur within this complex construction, as in (16b) above, but not if *svá-* is missing.

In EV, reflexive *tanú-* plus active-marked verbs are infrequent and restricted to causative stems and the 3PL perfect active form *māmṛjuḥ*, as in (18), which suggests an ongoing diachronic change towards the collapse of the active/middle voice distinction and a decline of middle marking of reflexivity:¹³

- (18) *vásam devásas tanvī ní māmṛjuḥ*
 power.ACC.SG god.NOM.PL self.LOC.SG down/into rub.3PL.PF.ACT
 ‘The gods rubbed their power upon (literally, down to/into) themselves’
 (RV 10.66.9d)

¹³In fact, middle and active voice slowly converge in the history of Sanskrit, and this is in line with a growing use of the masculine noun *ātmán-* ‘self’ as a nominal reflexive marker, regardless of the active/middle verbal endings from the AV (Post Early Vedic) onwards: *yáñ vayám dviṣmáḥ sá ātmánam dveṣṭu* (A). ‘The one who we hate, let that one hate himself’ (AV 16.7.5b); *ātmánam pitáram putrám paútram ... / yé priyás tán úpa hvaye* (MID) ‘To myself, the father, the son, the grandson, those that are dear, I invoke’ (AV 9.5.30ab).

The antecedent of *tanú-* is most usually the subject (in the nominative case). The few examples of non-subject antecedents (marked with a non-nominative case) are ambiguous, as in (19)¹⁴ below, where a meaning ‘body’ is also possible. Here, the antecedent of the indirect reflexive *tanvè* is found in the accusative *árl̥ham vatsám*.

- (19) árl̥ham vatsám caráthāya mātā
 unlicked.ACC.SG calf.ACC.SG wander.INF.DAT mother.NOM.SG
 svayám gātúm tanvè ichámānam
 by.himself way.ACC.SG body.DAT.SG seek.PTCP.MID.ACC.SG
 ‘The mother (leaving) the calf unlicked for wandering, [him] who is now seeking by himself a way for himself / his body’ (RV 4.18.10cd)

We may include these cases in this survey, as the reflexive interpretation is possible.

The head noun reflexive strategy also expresses indirect reflexivity. In these cases, the subject (in the nominative) and an oblique case (e.g., dative, locative, instrumental) are coreferential, as in (20).

- (20) a. utá sváyā tanvà sám vade tát
 and own.INS.SG body.INS.SG with say.1SG.PRS.MID this.ACC.SG
 ‘And I discuss this with myself’ (RV 7.86.2a)
 b. janáyan mitrám tanvè sváyai
 generate.PTCP.PRS.ACT.NOM.SG friend.ACC.SG body.DAT.SG own.DAT.SG
 ‘Generating a friend for yourself’ (RV 10.8.4d) with antecedent 2SG NOM (*tvám*)

Indirect reflexive constructions with *tanú-* (often with extra emphatic elements, such as *svá-*) are polysemous as regards semantic roles; this is not due to the reflexive nature of *tanú-* but rather due to the functional scope of the dative.

Prototypical indirect reflexives imply coreference with an argument of a three-slot verb in the clause (Kemmer 1993: 77–78). However, many EV verbs are underspecified for valency (even *dā-* ‘to give, take, receive, get, grab’), therefore, there are problems with describing these constructions as prototypical indirect reflexives in a syntactic sense.

¹⁴In this example, *svayám* is an Actor-oriented intensifier. Although it is not a reflexivizer, it is usually found in reflexive constructions. This can be explained by the fact that Actor-oriented intensifiers are frequently found with highly agentive subjects and these are a requirement for autopathic reflexives in Early Vedic.

2.2.3 The polysemy of *tanú-*

Tanú- can also occur as a reciprocal marker and as an intensifier, which corresponds to a frequent kind of polysemy cross-linguistically. Reflexives may be formally identical to both intensifiers and reciprocals (Geniušienė 1987; Kemmer 1993; König & Siemund 2000; König & Gast 2006).

As a recipropathic, the use of *tanú-*, as in (21), is an optional additional marker: it is not frequent in the corpus and in all cases it occurs in interaction with other reciprocal markers (the dual number, the middle voice and, often, the reciprocal adverb *mitháḥ* ‘mutually’):

- (21) *indrāgnī... mitháḥ hinvānā tanvā*
 indra.agni.NOM.DU mutually impel.MID.PTCP.NOM.DU body.NOM/ACC.DU
 ‘Indra and Agni, impelling each other mutually’ (RV 10.65.2ab)

As an intensifier, *tanú-* occurs in the nominative (as an adnominal intensifier), or in the instrumental (as an adverbial intensifier), as in (22a–22b), respectively, and it is not restricted to constructions with middle-marked verbs:

- (22) a. *svā tanúḥ bala-déyāya*
 own.NOM.SG body.NOM.SG power-give.GER
mā ā ihi
 1SG.ACC towards go.2SG.IMP.ACT
 ‘Come to me to give me power in your own person’ (‘Come to give me strength yourself’) (RV 10.83.5d)
- b. *mandasvā ándhasah*
 rejoice.2SG.IMP.MID juice.GEN.SG
rādhase tanvā mahē
 generosity.DAT.SG body.INS.SG great.DAT.SG
 ‘Rejoice from the (Soma) juice for the great generosity in person’ (RV 3.41.6ab, RV 6.45.27b)

As (22a) shows, *tanú-* can be combined with emphatic elements such as *svā-* also when it is used as an intensifier (see Kulikov 2007b and Orqueda 2019), thus structurally running in parallel with its use as reflexivizer.

2.3 Adjunct auto-possession constructions

As mentioned, Early Vedic has diverse strategies for the expression of the auto-possession function: the middle voice (see §2.1.1), the less frequent use of demon-

strative or personal pronouns in the genitive case, as illustrated in (10) above (*táva bhāgásya tṛpṇuhi* ‘Sate yourself/become sated from your portion!’, RV 2.36.4cd), and the noun phrase integrated by the adjective *svá-* plus a noun for the possessee, as outlined in §2.3.1.

2.3.1 Constructions with *svá-*

The adposessive adjective *svá-*, etymologically connected to Indo-European cognates that can express (reflexive) possession, such as Latin *suus* and Latvian *savs*, is also highly polysemous, both within the clause and in word-formation. Within the area of functions related to reflexivity, it can be used in auto-possessive function within the clause. In (23), for example, it indicates partial coreference with the subject. It can also be used as an intensifier, marking contrastive focus, as in (24). Furthermore, *svá-* can be used as a disjoint possessive marker, as in (25), and as the primary strategy for intensifying/reflexive nominal compounds (see §2.3.2). In none of these cases is it restricted to the combination with middle endings.

- (23) *vádhīm vṛtrám...*
 kill.1SG.A Vṛtra.ACC.SG
svéna bhāmena taviṣáḥ babhūvān
 own.INS.SG rage.INS.SG strong.NOM.SG become.PTCP.ACT.NOM.SG
 ‘I have killed Vṛtra, having become strong through my own rage’ (RV 1.165.8ab)

- (24) a. *pibatu vṛtrakhādáḥ sutám sóma*
 drink.3SG.IMP.ACT vṛtra.gnawer.NOM.SG pressed.ACC.SG soma.ACC.SG
dāśúṣah své sadhásthe
 worshipper.GEN.SG own.LOC.SG place.LOC.SG
 ‘Let the Vṛtra-gnawer drink the pressed soma in the worshipper’s own/very seat’ (RV 3.51.9cd)
- b. *sváḥ svāya dhāyase*
 self.NOM.SG own.DAT.SG nourishing.DAT.SG
kṛṇutām rtvíg rtvíjam
 make.MID.IMP.3SG priest.NOM.SG priest.ACC.SG
 ‘Let the priest himself (and not someone else) make the priest for his own nourishing’ (RV 2.5.7a)

- (25) ...te *ápa sā* *nú várjāt*
 you.GEN.SG away she.NOM.SG just thunderbolt.ABL.SG
dvitā anamat *bhiyásā svásya manyóh*
 just.so bent.3SG.IMPF.ACT fear.INS.SG OWN.GEN.SG fury.GEN.SG
 ‘Now, she bent away just so from your thunderbolt out of fear of your
 fury’ (RV 6.17.9ab)

As examples (24) through (25) show, the use of *svá-* is not restricted to specific syntactic slots. As for the person feature of its antecedent, 3rd person singular antecedents are in the majority, although the 1st or 2nd person are also frequent, as in (23) and (25), respectively. Regarding the case of the antecedent, it is usually in the nominative subject position (see Vine 1997), but there are examples with an oblique case antecedent in non-subject position, as in (24a). Cases of genitive antecedents seem to be restricted to a few nouns, to 2nd personal pronouns and demonstratives, while there are no 1st person genitive antecedents.¹⁵ Example (26), in turn, shows that the antecedents of *svá-* can be subjects of passive constructions (Grestenberger 2021). This confirms that the antecedents for *svá-* need not be highly agentive.

- (26) *mārjālyāh* *mṛjyate* *své*
 fit.for.grooming.NOM.SG groom.3SG.PASS own.LOC.SG
dámūnāh
 house.master.NOM.SG
kavi-praśastāh *átithih* *śivāh* *nah*
 poet-praised.NOM.SG guest.NOM.SG kind.NOM.SG our.GEN.PL
 ‘Fit to be groomed, he is groomed in his own [house] as master of the
 house, praised by poets, our kind guests’ (RV 5.1.8ab)

2.3.2 Nominal compounds with *svá-*

As the first member of a nominal compound,¹⁶ *svá-* may be added to a deverbal noun or adjective, giving rise to a reflexive (e.g., the first compound in 27a),

¹⁵Hock (1991) claims that cases as in (24a) confirm that genitives controlling reflexives have more agentive-like features. But see also Vine (1997: 212–213), who considers that in these cases the genitive indicates the introduction of a new “rhematic” element that binds the auto-possessive marker.

¹⁶Interestingly, *tanū-* and *svayám* are also first members of nominal compounds in EV. However, the former is only used with its lexical meaning (e.g. *tanū-tyājah* ‘leaving their (own) bodies’), while the latter, with only two occurrences in the RV, has an intensifying/anticausative meaning (e.g. *svayam-jāh* ‘self-produced’, RV 7.49.2b), in reference to waters that arise by themselves (springs), in opposition to waters that are found by digging (well water).

auto-possessive, as in (27b), intensifying (e.g., the second compound in 27a), or anticausative interpretation, as in (27c):

- (27) a. *svá-kṣatrāya sváya-śase*
self-ruling.DAT.SG self-glorious.DAT.SG
'For the self-ruling and the self-glorious' (RV 5.48.1cb)
- b. *sva-dháyā mādáyethe*
self-power.INS.SG rejoice.2DU.CAUS.MID
'You two rejoice with your own power' (RV 1.108.12b)
- c. *yé sva-jāḥ vavrásah*
who.NOM.PL self-generate.NOM.PL hole.NOM.PL
'Who are self-generated, like holes (in the earth)' (RV 1.168.2a)

Notably, unambiguous reflexive examples are rare and usually can also be interpreted as intensifiers. This confirms the formal overlap between reflexives and intensifiers, which is cross-linguistically frequent in word formation (compounding or derivation; König 2011).¹⁷

3 Final remarks

We can draw the following conclusions regarding reflexive constructions in Early Vedic. First, we showed that polysemy is widespread for the different strategies linked to reflexivity. Secondly, we showed that, while the middle voice is used for both autopathic reflexives and auto-possessives, the use of differential markings for autopathic and auto-possessive constructions arises already in Early Vedic. Thirdly, non-nominative subjects controlling autopathic reflexives are not an ordinary case, although they are attested, as long as they are agent-like NPs. This

¹⁷The complex polysemic nature of *svá-* may be explained in terms of its diachrony from PIE. Contrary to the common opinion that it develops from an original reflexive root in Proto-Indo-European, we believe that a possessive marker was eventually formed on the base of an original deictic marker (a proximate demonstrative stem) that was high in the features of topicality and animacy. This would explain, particularly, the uses with a genitive antecedent and the disjoint possessive. A brief list of facts that support this interpretation is: first, that in practically all cases *svá-* has an animate referent (which is not usually a requisite for disjoint possessives); secondly, that *svá-* frequently occurs in prominent slots in the stanza, mostly the initial position of the clause, in Early Vedic but not in later varieties (by contrast, reflexive markers and possessives need not to be linked to prominent clause slots); thirdly, that intensification occurs in a high number of cases of nominal compounds, while this is not the case of reflexive compounds (see especially Orqueda 2017 for an extensive overview of this claim).

suggests that antecedents of reflexivizers are mainly selected according to semantic features rather than syntactic functions.

Lastly, we proposed some diachronic explanations for the strategies under study. In particular, we have shown the emergent use of nominal marking for reflexives in the autopathic and in the oblique domains, which is in line with the eventual loss of voice distinctions in later stages of the language. Reflexives have progressively come to require that the antecedent is an NP high in the features of volition and control, thus distinguishing reflexives from other related functions (such as anticausatives or statives). From our perspective, this development is consistent with changes from a more semantically determined proto-language towards a more configurational syntax. Further research on these topics in later descendants would undoubtedly contribute to a better understanding of these diachronic developments.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ACT	active voice	MID	middle voice
AOR	aorist	PF	perfect
GER	gerund	SUBJ	subjunctive
IMPF	imperfect		

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Chapter 14

Reflexive constructions in Yiddish

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The chapter describes the reflexive construction in Yiddish – a Germanic language that existed alongside Slavic languages and therefore underwent significant change through Slavic influence. The Yiddish reflexive marker *zikh* is used to express coreference in autopathic, oblique and adposessive domains, and is often paired with the focus particle *aleyn*; however, *aleyn* cannot be used in functions that go beyond coreference. The pronoun *zikh* was lexicalized into many idiomatic constructions; when regular, those functions include an array of middle, passive and impersonal meanings. It is claimed that contact with Slavic languages might have played a role in developing these two forms and functions.

1 Introduction

Yiddish, the language of Ashkenazi Jews, belongs to the Indo-European language family, and within it, to the Germanic group. Its closest relative is German, as both languages originate from Middle High German. Besides this genetic relation, Standard German continued to influence Yiddish, especially its written practices, in various times and genres. Hebrew and Aramaic, the languages of Jewish sacred texts, also had significant influence on Yiddish. As Jews migrated eastward, their language started absorbing features of Slavic languages on multiple levels. As a result, Yiddish was divided in two sublanguages: Western Yiddish, which was spoken in Western Europe (Germany, Netherlands, France), was mostly no longer in use by the end of the 18th century, though some speakers were found even in the mid-20th century (Katz 2014). What is now commonly understood under the label “Yiddish” is known in linguistic circles as Eastern Yiddish. Its major dialects include Central Yiddish, once spoken on the territory of modern Poland,



Hungary and Western Ukraine (historical Galicia), Southeastern Yiddish, once spoken on the territory of Ukraine, Romania and Moldova; and finally, Northeastern Yiddish, spoken in the historical district of Lite (now Lithuania, Belarus, northern Ukraine), as shown in Figure 1. The differences between dialects involve vowel shifts and lexical variation along with grammatical innovations.



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Figure 1: Map of Yiddish dialects, based on Katz (2014)

The Jewish emigration and the Holocaust resulted in Yiddish being found in North and South Americas, England, Australia, Israel rather than in the area where it was originally spoken. Yiddish is spoken primarily by ultra-religious communities, but there are also heritage speakers. The language has a literary standard, developed in the 19th century. It is based on both Northeastern and Southeastern Yiddish and used in fiction and secular press, and this is the language that will be mainly addressed in this paper. Yiddish uses Hebrew letters and has several orthographic traditions. The standard one was introduced by YIVO (Institute for Jewish Research) in the 1930s and is accompanied with standard transliteration that will be used in this paper.¹ Regarding the position of

¹A simple overview is available on the organization's website: <https://www.yivo.org/Yiddish-Alphabet>.

the verb in the clause, Yiddish, as a Germanic language, is V2. Pro-drop is possible under certain circumstances. In general, Yiddish word order is highly influenced by Slavic languages with flexible word order that can express topic and focus. In Yiddish the verb agrees with its subject, case marking distinguishes S/A (nominative case) and P (accusative case). Thus, Yiddish is a morphologically accusative language. Yiddish has three genders: masculine, feminine and neutral (Northeastern Yiddish has only masculine and feminine). While all singular nouns fall into either one of these gender categories, plural nouns do not distinguish gender. Gender, together with definiteness, plays an important role for the noun-adjective agreement pattern. There are four cases in Yiddish: nominative, genitive, dative, and accusative. The only nouns that have case suffixes are proper names and a short list of animate nouns.² For other nouns the case is expressed in the form of definite articles. Yiddish indefinite nouns can occur with an indeclinable indefinite article ‘a/an’ in singular but they do not have any article when they are in plural. Definite nouns are preceded by a definite article that agrees in gender and expresses the case in singular. In plural it has the indeclinable form *di*. The basic word order within NPs is determiner-attribute-noun, adjectives can also appear in postposition, as shown in (1–2).^{3,4} Fleischer (2009) analyses these cases as nominalizations. Possessive pronouns (see §2) can appear in postposition too.

- (1) a. *a sheyn meydl*
INDEF beautiful girl
'a beautiful girl' (Jacobs et al. 1994: 408)
- b. *a meydl a sheyn-e*
INDEF girl INDEF beautiful-F.SG
'a beautiful girl' (Jacobs et al. 1994: 408)
- (2) *dos land dos farboten-e*
DEF.N country DEF.N forbidden-N.SG
'the forbidden country' (Weinreich 1958: 382)

This was an overview of the sociolinguistic situation and language structure, necessary for an understanding of the language. The data was collected with the questionnaire by Janic & Haspelmath (2023 [this volume]) and the organization

²Zero case suffixes on nouns and articles will be omitted in the glosses as well as the case suffixes on locative groups (all prepositions always require dative).

³Examples (4–39) have been glossed by the author; glosses for (1–3) adjusted to the same standards.

⁴“More solemn than *dos farbótene land*” (Weinreich 1958: 382).

of the present chapter follows its structure. It consists of the following sections: §2 is a description of Yiddish pronouns, §3 discusses the distinctions based on semantic groups of verbs, §4 addresses coreference between various semantic roles, §5 is on contrast between exact and inclusive coreference, §6 is on long-distance coreference. Finally, §7 briefly summarizes the functions of non-coreferent uses of the reflexive pronoun.

2 Pronouns and their basic uses

Yiddish has a rich system of pronouns, including personal, possessive, reflexive, demonstrative, interrogative, relative and indefinite. In this paper, I will only focus on personal, possessive, and reflexive. Personal pronouns differentiate three cases: nominative, dative and accusative, as in Table 1.⁵ In Northeastern Yiddish, the distinction between oblique cases collapsed in favor of historical dative forms.

Table 1: Personal pronouns in Yiddish

	1SG.M	2SG.M	3SG.M	3SG.F	3SG.N	1PL	2PL	3PL
NOM	<i>ikh</i>	<i>du</i>	<i>er</i>	<i>zi</i>	<i>es</i>	<i>mir</i>	<i>ir</i>	<i>zey</i>
DAT	<i>mir</i>	<i>dir</i>	<i>im</i>	<i>ir</i>	<i>im</i>	<i>undz</i>	<i>aykh</i>	<i>zey</i>
ACC	<i>mikh/mir</i>	<i>dikh/dir</i>	<i>im</i>	<i>zi</i>	<i>es</i>	<i>undz</i>	<i>aykh</i>	<i>zey</i>

Yiddish has two different possessive constructions with pronominal possessors. One construction has the pronoun in preposition and another one is with the pronoun in postposition. The one with the pronoun in preposition, as in (3), is morphologically simple: it only distinguishes person and number, while the one in postposition, as in (4), demonstrates also gender and case agreement.

- (3) a. *mayn bruder*
POSS.1SG brother
'my brother'
- b. *a bruder mayn-er*
INDEF brother POSS.1SG-M.NOM
'a brother of mine' (Weinreich 1958: 589)

⁵In the dative case, the variants *mikh/dikh* is standard, *mir/dir* is dialectal.

All possessive pronouns are listed below in Table 2. In contrast to the neighboring languages, such as Russian or Polish, there is no reflexive possessive pronoun.

Table 2: Yiddish reflexive pronoun and personal pronoun categories

	Preposition		Postposition			
	Singular object	Plural object	Singular object		Plural object	
1SG	<i>mayn</i>	<i>mayne</i>	<i>mayner</i>	<i>mayne</i>	<i>mayns</i>	<i>mayne</i>
2SG	<i>dayn</i>	<i>dayne</i>	<i>dayner</i>	<i>dayne</i>	<i>dayns</i>	<i>dayne</i>
3SG.M	<i>zayn</i>	<i>zayne</i>	<i>zayner</i>	<i>zayne</i>	<i>zayns</i>	<i>zayne</i>
3SG.F	<i>ir</i>	<i>ire</i>	<i>irer</i>	<i>ire</i>	<i>irs</i>	<i>ire</i>
3SG.N	<i>zayn</i>	<i>zayne</i>	<i>zayner</i>	<i>zayne</i>	<i>zayns</i>	<i>zayne</i>
1PL	<i>undzer</i>	<i>undzere</i>	<i>undzerer</i>	<i>undzere</i>	<i>undzers</i>	<i>undzere</i>
2PL	<i>ayer</i>	<i>ayere</i>	<i>ayerer</i>	<i>ayere</i>	<i>ayers</i>	<i>ayere</i>
3PL	<i>zeyer</i>	<i>zeyere</i>	<i>zeyere</i>	<i>zeyerer</i>	<i>zeyers</i>	<i>zeyere</i>

The reflexive pronoun *zikh* does not distinguish between number or gender. It is defective in case: it does not have the nominative. Besides that, its form in the dative and accusative is the same, which is not the case for other pronouns at least in Standard Yiddish, as demonstrated in Table 3, which contrasts the reflexive pronoun *zikh* with a personal pronoun *ikh*. It is important to note that both personal and possessive pronouns function as clitics. Just like the negation and certain adverbs with “weak semantic baggage” (Jacobs et al. 1994: 169), they must appear between the two parts of an analytic verb form, unlike NPs, which cannot take that position.

Table 3: Yiddish reflexive pronoun and personal pronoun categories

	Reflexive	Personal pronoun	1SG.M
	NOM	-	
DAT	<i>zikh</i>	<i>mikh</i>	
ACC	<i>zikh</i>	<i>mir</i>	

In Standard Yiddish the reflexive pronoun is used in all persons, however, in one dialect, Central Yiddish, personal pronouns are used in 1st and 2nd person

instead, as shown in Table 4. Example (4)⁶ further illustrates this point. A personal pronoun rather than the reflexive pronoun *zikh* is used in it, as the author speaks Central Yiddish.

Table 4: Personal pronouns in Yiddish

Reflexive verb meaning 'wash oneself'	Standard Yiddish reflexive uses	Central Yiddish reflexive uses	Cf. personal pronouns
PRS.1SG	<i>ikh vash zikh</i>	<i>ikh vash mikh</i>	<i>mikh</i>
PRS.2SG	<i>du vashst zikh</i>	<i>du vashst zikh</i>	<i>dikh</i>
PRS.3SG (M/F/N)	<i>er/zi/es vasht zikh</i>	<i>er/zi/es vasht zikh</i>	<i>im/zi/es</i>
PRS.1PL	<i>mir vashn zikh</i>	<i>mir vashn undz</i>	<i>undz</i>
PRS.2PL	<i>ir vasht zikh</i>	<i>ir vasht aykh</i>	<i>aykh</i>
PRS.1PL	<i>zey vashn zikh</i>	<i>zey vashn zikh</i>	<i>zey</i>

- (4) *her shoyn oyfun gey dikh beser vash-n*
 stop.IMP already up and go.IMP.SG 2SG.ACC better wash-INF
 'Stop already, better go take a bath.' (CMY, R' Yoykhenen gabe. Perets
 Yitskhok-Leyb)

Now that the formal properties of the reflexive pronoun have been discussed, its basic uses can be analyzed. The pronoun has two main meanings, as demonstrated in (5): regular coreference between subject and object as well as reciprocal one.

- (5) *zey hob-n zikh lib*
 3PL have-PRS.3PL REFL nice
 'They love each other./They love themselves.'

Examples in (6–9) illustrate some more cases of coreference between the object and the subject.

- (6) *ikh hob zikh (?aleyn) gezen in a shpigl*
 1SG AUX.1SG SELF FOC see.PST in INDF mirror
 'I saw myself in the mirror.'

⁶The examples with sources are taken from Corpus of Modern Yiddish (CMY): <http://web-corpora.net/YNC/search/> and Yiddish Book Center's Full-Text Search (YBC): <https://ocr.yiddishbookcenter.org/> The rest of examples have been elicited.

- (7) a. *mayn khaver hot faynt zikh aleyn*
 POSS.1SG friend AUX.3SG hate SELF FOC
 b. ? *mayn khaver hot zikh faynt*
 POSS.1SG friend AUX.3SG SELF hate
 ‘My friend hates himself.’
- (8) a. *zi hot ge-loyb-t zikh aleyn*
 3SG.F AUX.PRS.3SG PST-praise-PST SELF FOC
 b. *zi hot zikh ge-loyb-t*
 3SG.F AUX.PRS.3SG SELF PST-praise-PST
 ‘She praised herself.’
- (9) *di narish-e tokhter koyle-t zikh aleyn on*
 DEF.F stupid-NOM.F.SG daughter slaughter-PRS.3SG SELF FOC without
 a *meser*
 INDF knife
 ‘The stupid daughter is killing herself without a knife.’ (CMY, Nokhem Shtif)

As the examples above show, in some cases the reflexive particle is accompanied by the focus particle *aleyn* (literally meaning ‘alone’).⁷ A typical use of *zikh aleyn* is illustrated in (10). *Aleyn* is used here as a contrastive particle, because the use of this form alone to co-refer subject and object argument would be unusual.

- (10) *zey hob-n zikh aleyn ge-shik-t a postkartl*
 3PL AUX-3PL SELF FOC PST-send-PST INDF postcard
 ‘They sent a postcard to themselves (out of all).’

However, *zikh aleyn* spreads over all domains of coreference, while *zikh* without *aleyn* is reserved for non-referential contexts, as in (§7). One speaker even produced (11) in order to explain this phenomenon. The verb *zikh leygn* ‘lie down’ cannot be used with *zikh aleyn*, because the reflexive pronoun is grammaticalized to be a decausative marker.⁸

⁷The verb ‘to hate’ in Yiddish is a two-word expression. The reason why word order in (7a) and (7b) differs is because *zikh* is a clitic but *zikh aleyn* as a unit is too heavy to be in a clitic position – this is explained in greater detail in §4.

⁸The decausative function is also often referred to as anticausative. While the former term refers to the the non-agentive nature of the situation, the latter focuses on the spontaneity of the change.

- (11) a. *dos yingl leyg-t zikh in bet*
DEF.N boy put-PRS.3SG SELF in bed
b. **dos yingl leyg-t zikh aleyn in bet*
DEF.N boy put-PRS.3SG SELF FOC in bed
'The boy goes to bed.'

It is clear that the choice *zikh* vs. *zikh aleyn* depends on multiple factors that have never been clearly described. I will elaborate on their distribution in §3 and §4.

3 Contrast between specific types of verbs

3.1 Introverted-extroverted

According to Haiman (1985: 803), transitive verbs that allow a human object fall into two groups: introverted (like 'wash', 'shave', 'dress', 'defend oneself') and extroverted (like 'kill', 'kick', 'hate', 'criticize'). In Yiddish, introverted verbs are usually used with *zikh*, while extroverted ones are used with *zikh aleyn*, whereas *zikh* is grammatical but less preferable, as shown in (12–13). Moreover, the default interpretation of (12b) would rather be antipassive (see §7). I elaborate on the use of *zikh* vs. *zikh aleyn* with different semantic roles in §4.

- (12) a. *der hunt hot zikh gevashn*
DEF.M dog AUX.PRS.3SG SELF wash.PST
b. ?*der hunt hot zikh aleyn gevashn*
DEF.M dog AUX.PRS.3SG SELF FOC wash.PST
'The dog was washing himself.'
- (13) a. *der hunt hot zikh aleyn gebisn*
DEF.M dog AUX.PRS.3SG SELF FOC bite.PST
b. ?*der hunt hot zikh gebisn*
DEF.M dog AUX.PRS.3SG SELF bite.PST
'The dog bit itself.'

3.2 Body-part vs. whole body

Both body-part and full body actions are expressed with a reflexive pronoun, as in (14). If the body part is expressed, it is modified just by a definite article rather than possessive pronoun, as in (15). The perfectivizing/binding particle *op*

is used in the sentence with the transitive verb. *Aleyn* is usually not used in these contexts, as the actions are introverted.

- (14) *er hot zikh ge-gol-t*
 3SG.M AUX.PRS.3SG SELF PST-shave-PST
 ‘He shaved.’
- (15) *er hot zikh op-gegol-t di hor*
 3SG.M AUX.PRS.3SG SELF off-shave-PST DEF.PL hair
 ‘He shaved his hair.’

4 Coreference of the agent argument with various semantic roles

This section first discusses how the coreference with different semantic roles is encoded in Yiddish – in autopathic, oblique and adposessive domains, according to Haspelmath (2023 [this volume]).

4.1 Coreference of the subject with various semantic roles

Interestingly, the type of the verbs and the semantic role of the argument the subject is coreferent with is another factor contributing to the choice of pronoun form – just the personal pronoun *zikh* or *zikh aleyn*. I first consider the coreference between the subject and the possessor and locative. Then I discuss the coreference of the subject with the recipient and beneficiary, taking into account syntactic changes this coreference entails.

As Yiddish reflexive pronoun *zikh* does not have a reflexive possessive pronoun, regular possessive pronouns are used instead. This is illustrated by (16), where the possessor is coreferent to the subject, which is encoded by a 3rd person singular feminine pronoun *zi*. The possessor is the encoded by 3rd person singular possessive pronoun *ir* (the example has two occurrences of it).

- (16) *zi hot hastik tsu-ge.halt.n ir tash lebn*
 3SG.F AUX.PRS.3SG hastily PFV-hold.PST POSS.3SG.F bag next_to
 ir buzem
 POSS.3SG.F.ACC chest
 ‘She hastily squeezed her bag close to her chest.’

It is also possible to express coreference using the word *eygener* ‘own’, used more frequently with a possessive pronoun rather than on its own.⁹ A range of ways to express that is shown in (17).

- (17) a. *shikl leyen-t zayn bukh*
Shikl read-PRS.3SG POSS.3SG.N.ACC book
'Shikl_i is reading his_i book.'
- b. *shikl leyen-t zayn eygen bukh*
Shikl read-PRS.3SG POSS.3SG.N.ACC own book
'Shikl_i is reading his_i book.'
- c. ? *shikl leyen-t an eygen bukh*
Shikl read-PRS.3SG a POSS.3SG.N.ACC book
'Shikl_i is reading his_i book.'
- d. *shikl leyen-t dos eygen-e bukh*
Shikl read-PRS.3SG DEF.N OWN-N.ACC book
'Shikl_i is reading his_i book.'

As for locative contexts, the reflexive pronoun is usually used, though the use of personal pronouns would be an option for some dialects. Indeed, contexts like (18b) occur, in addition to standard Yiddish (18a).

- (18) a. *zi hot gezen a shlang lebn zikh*
3SG.F AUX.PRS.3SG see.PST INDF snake near SELF
'She_i saw a snake near her_i'
- b. *zi hot gezen a shlang lebn ir*
3SG.F AUX.PRS.3SG see.PST INDF snake near 3SG.F.DAT
'She_i saw a snake near her_j.'/?She_i saw a snake near her_i'

Moving to the agent-beneficiary and agent-recipient coreference, it is important to briefly discuss the word order with pronouns, their status as clitics and use of prepositions vs. bare datives. In (19b), like in (7), the dative reflexive pronoun *zikh* appears between the two parts of an analytic verb form (the auxiliary and the past participle), while *zikh aleyn* is too heavy to be a clitic. Alternatively, *zikh aleyn* is used with the preposition *far* ‘for’ instead of bare dative and therefore follows the participle in (19a), (20), and (21).

⁹For the question of contrast between object and nominal adpossessor, the distinction might also be expressed by word order: postposition vs. preposition of the possessive pronoun.

In corresponding non-coreferent examples personal pronouns would be used. Besides that, there is variation between the use of bare dative and prepositional constructions. *Zikh*, as a clitic, is more frequently used with the former, and *zikh aleyn* with the latter.

- (19) a. *zi hot ge-koyf-t a bukh far zikh (aleyn)*
3SG.F AUX.PRS.3SG PST-buy-PST INDF book for SELF FOC
- b. *zi hot zikh ge-koyf-t a bukh*
3SG.F AUX.PRS.3SG SELF PST-buy-PST INDF book
'She bought a book for herself'
- (20) *der bokher hot ge-kokh-t vetchere far zikh (aleyn)*
DEF.M boy AUX.PRS.3SG PST-cook-PST dinner for SELF FOC
'The boy cooked a dinner for himself.'
- (21) *zey hob-n ge-boy-t a hoyz far zikh (aleyn)*
3PL AUX-PRS.3PL PST-build-PST a house for SELF FOC
'They built a house for themselves.'

The use of *aleyn* is optional for the expression of coreference of agent with the beneficiary, as just shown in (19–21), expressing self-benefactive meaning. Its use is almost obligatory, though, for the expression of coreference of the agent with the recipient, as in (22–24). In corresponding non-coreferent examples personal pronouns would be used.

- (22) *er hot ge-red-t tsu zikh aleyn*
3SG.M AUX.PRS.3SG PST-buy-PST to SELF FOC
'He talked to himself'
- (23) *zey hobn ge-shik-t a postkartl tsu zikh aleyn*
3PL AUX.PRS.3PL PST-send-PST INDF postcard to SELF FOC
'They sent a postcard to themselves.'
- (24) *dos meydl hot zikh aleyn ge-geb-n a matone*
DEF.N girl AUX.PRS.3SG SELF FOC PST-give-PST a present
'The girl gave herself a present'

4.2 Coreference between non-subject arguments

In sentences with coreference between non-subject arguments, such as in (25), *zikh aleyn* is used. The use of bare *zikh* would rather indicate the coreference with the subject. Thus in (25) it would be interpreted as coreference with 'the women' – the women would be teaching him about themselves.

- (25) *barni makh-t a randevu mit dray froy-en in zayn*
Barni make-PRS.3SG INDF rendez-vous with 3 woman-PL in POSS.3SG
muter-s shtub yede_eyne fun zey lern-t im
mother-POSS home each of 3PL teach-PRS.3SG 3SG.M.ACC
epes vegn zikh aleyn
something about SELF FOC
'Barni has a date with three women in his mother's house, each of them
teaches him something about himself' (CMY, Forverts)

5 Contrast between exact and inclusive coreference

In sentences, where the coreference is inclusive, *zikh aleyn* is preferred, consider (26c) as opposed to (26a–26b). This can be explained by means of contrastive nature of the context in (26c) (cf. §3).

- (26) a. *zi hot lib zikh aleyn*
3SG.F have.PRS.3SG nice SELF FOC
'She likes herself'
b. *?zi hot zikh lib*
3SG.F have.PRS.3SG SELF nice
'She likes herself'
c. *zi hot lib zikh aleyn un ander-e*
3SG.F AUX.PRS.3SG nice SELF FOC and other-PL
'She likes herself and others.'

6 Long-distance coreference

There is no special means for the long-distance domain, that is, to express coreference between arguments going beyond the minimal clause, as illustrated in (27).

- (27) *zi hot ge-trakht az zi hot genug gelt*
3SG.F AUX.PRS.3SG PST-think COMP 3SG.F have.PRS.3SG enough money
'She_i thought she_{i/j} has enough money.'

7 Reflexive verbs and other constructions

This chapter discusses all uses of the reflexive pronoun that go beyond coreference. §7.1 gives an overview of all uses, while sections §7.2–§7.4 focus on regular

correspondences between reflexive and non-reflexive verbs that are illustrated by pairs of examples.

7.1 Types of reflexive verbs with the form *zikh*

A reflexive verb is an umbrella term for any verb used with a reflexive pronoun, regardless of its meaning. These are three types: one type, the regular one, contains the verbs that always have active counterparts, and there is no difference in core lexical meaning (i.e. *vashn* ‘wash’ vs. *zikh vashn* ‘wash (oneself)'). The second one does have active counterparts, but the lexical meaning is different (i.e. *masker zayn* ‘cite, mention’ – *zikh masker zayn* ‘appear before Hasidic rebe’). Finally, the third type includes deponents. This is the case when the reflexive verb does not have a non-reflexive counterpart (*dakhtn zikh* ‘seem’ - **dakhtn*).

All these groups contain loanwords from Slavic and Hebrew/Aramaic. In the case of Slavic loanwords, Yiddish can calque the corresponding construction with a reflexive form in the source language (i.e. *staren zikh* ‘try hard’ - **staren*; Rus. *starat's'a* ‘try hard’, where non-reflexive **starat*’ does not exist). Sometimes the loanword is non-reflexive, but a reflexive counterpart for this non-reflexive expression is formed within the Yiddish language under the influence of Slavic patterns: *moyde zayn* ‘admit, confess (tr.)’ vs. *zikh moyde zayn* ‘admit, confess’ (with a preposition or a clause), cf. Rus *priznat'* – *priznat'-s'a* with the same meaning. The Hebrew/Aramaic constructions are significantly different structurally, as they are constructions made of Semitic present participles introduced by an auxiliary verb (*moyde* is a participle and *zayn* is infinitive of the verb ‘be’). Only regular pairs and types of the semantic relation within these pairs are described in the rest of this section. These include both words of Germanic origin and loanwords.

7.2 Middle function

Following Kemmer (1993), we distinguish between the reflexive function, which connects the subject and object that are coreferent but constitute two different entities, and the middle function, which portrays the subject and the object as one inseparable entity. The middle function of the reflexive marker in Yiddish has a rich array of subfunctions. The examples below illustrate grooming verbs (28), coreference only with some body parts, such as the head in (29) and change of body posture (30).

- (28) *in_ergeſt ver-t nisht dermont, az me*
 nowhere AUX.PRS.3SG NEG mention.PASS.PRS.3SG that IMPERS
hot zi gevashn, ge-reynik-t, un zikher nisht ongeton
 AUX.PRS.3SG 3SG.F.ACC wash.PST PST-clean-PST and sure not dress.PST
vays-e kleyder un ge-shik-t in kheyder
 white-PL clothes.ACC and PST-send-PST in school
 'It's not mentioned anywhere that they gave her a bath, cleaned her, and for sure not dressed her up in white clothes and sent to school.' (CMY, Forverts)
- (29) a. *ba-tog tut er nisht oys di kroyn*
 by-day take 3SG.M NEG off DEF.F.ACC crown
 'During the day he does not take off his crown.' (CMY, Itsik Manger)
 b. *er hot ge-halt-n in oys-ton zikh*
 3SG.M AUX.PRS.3SG PST-AUX-PST in off-take.CONT REFL
 'He continued to undress.' (YBC, Mendele Mocher Sforim)
- (30) a. *zi hot ongehoybн zey oyftsuheybn*
 3SG.F AUX.PRS.3SG start.PST 3PL.ACC raise.INF
 'Then she started to pick them <goldfish> up.' (CMY, Lewis Carroll, trans. Adina Bar-El)
 b. *bekheyn hot zikh alis oyfgehoybн*
 then AUX.PRS.3SG REFL Alice raise.PST
 'Then Alice rose up.' (CMY, Lewis Carroll, trans. Adina Bar-El)

The decausative function "excludes participation of a volitional agent in the concept of the situation" (Paducheva 2003: 173), which differentiates it from the passive. The function is presented in (31b), while (32b) illustrates involuntary movement of a person which is another type of a spontaneous action. In (33b) the reflexive verb describes the quality of an object rather than the result of an action.

- (31) a. *varenka iz in hut un mitn shirm in di*
 Varenka AUX.PRS.3SG in hat and with.DEF.M umbrella in DEF.PL
hent gezesn bam tish un bakukt di pruzhine,
 hand.PL sit.PST at.DEF.M table and look.PST DEF.F.ACC spring
velkh-e kitи hot tsebrokhn
 COMP-F Kitty AUX.PRS.3SG break.PST

'Varenka, wearing a hat, with an umbrella in her hands, was sitting at the table, looking as the spring that Kitty broke.' (YBC, Leo Tolstoy, trans. Shlomo Sheynberg)

- b. *di karete vet zikh glaykh, vi ir vet*
 DEF.F carriage AUX.3SG REFL immediately when you.2PL AUX.3SG
aroysforn fun der shtot, tsebrekhn
 get_out.FUT from DEF.F city break.FUT

'Once you leave the city, the carriage will break down.' (YBC, Fyodor Dostoyevski, trans. Ts. Sarin)

- (32) a. *avrom ovinu hot im vi an alt-n*
 Abraham forefather AUX.PRS.3SG 3SG.M.DAT like INDF old-ACC
kamerad di hant geshoklt
 comrade DEF.F.ACC hand shake.PST
 'Abraham the forefather shook his hand like an old friend.' (CMY, Yitskhok-Leyb Perets)
- b. *do hot zikh di dremlmoyz geshoklt*
 here AUX.PRS.3SG REFL DEF.F.NOM dormouse shake.PST
 'Here the dormouse started shaking.' (CMY, Lewis Carroll, trans. Adina Bar-El)

Examples (33–35) illustrate emotion middles, in the terminology of Kemmer (1993).

- (33) a. *un eyn kuzminer balebos shrek-t dem*
 and one from_Kuzmin landlord frighten-PRS.3SG DEF.M.ACC
tsveyt-n
 second-ACC
 'And one landlord from Kuzmin intimidates the other.' (CMY, Sholem Ash)
- b. *der protses shrek-t mikh nisht*
 DEF.M process frighten-PRS.3SG 1SG.ACC NEG
 'The process does not scare me.' (CMY, Yitskhok-Leyb Perets)
- (34) a. *er shrek-t zikh far der zun*
 3SG.M frighten-PRS.3SG REFL for DEF.F sun
 'He is afraid of the sun.' (CMY, Z. Stivenson)
- b. *shrek zikh nisht, Binyomen!*
 frighten.IMP.SG REFL NEG Binyomen
 'Don't be afraid, Binyomen!' (YBC, Mendele Mocher Sforim)

- (35) a. *ot iz der hoz ongekumen tsu der tir, un*
 here AUX.PRS.3SG DEF.M hare up.come.PST to DEF.F door and
hot ge-pruv-t zi tsu efen-en
 AUX.PRS.3SG PST-try-PST 3SG.F.ACC to open-INF
 ‘So the Rabbit came up to the door and tried to open it.’ (CMY, Lewis Carroll, trans. Adina Bar-El)
- b. *ober vayl di tir hot zikh ge-efn-t arayn, un*
 but because DEF.F door AUX.PRS.3SG REFL PST.open.PST inside and
alise-s elnboyg iz geven shtark tsugedrikt tsu der
 Alice-POSS elbow AUX.PRS.3SG be.PST strong press.PST to DEF.F
tir, iz der dozik-er pruv nit matsliyekh geven
 door AUX.PRS.3SG DEF.M this-M attempt NEG succeed AUX.PST
 ‘But because the door was opening inside, and Alice’s elbow was pressed to the door, the attempt was not successful.’ (CMY, Lewis Carroll, trans. Adina Bar-El)

7.3 Passive and impersonal functions

Passive as a category in Yiddish is problematic (see Nath 2009 – there is a construction formed by the verb *vern* ‘to become’ and past participle, but it is very formal and rarely used. The use of the reflexive pronoun as a passive marker, as in (36b),¹⁰ as opposed to the regular impersonal construction, as in (36a), is characteristic of Soviet Yiddish, which was under Russian influence.

- (36) a. *me farkoyf-t dos bukh in ot der krom*
 IMPERS sell-PRS.3SG DEF.N book in this DEF.F shop
 ‘The book is (being) sold in this store.’ (Nath 2009: 184)
- b. *dos bukh farkoyf-t zikh in ot der krom*
 DEF.N book sell-PRS.3SG REFL in this DEF.F shop
 ‘The book is (being) sold in this store.’ (Nath 2009: 184)

As opposed to the passive one, the impersonal function is typical of Yiddish, especially with certain verbs of communication, as in (37b). The impersonal subject pronoun *es* is used when it is in first position in the clause but is omitted if any other constituent is fronted.

¹⁰While some researchers would put this function under the same label with decausative examples, their syntactic derivation is different. Geniušienė (1987: 17) provides reasoning based on the difference of semantic roles (“subjective” and “objective” reflexive verbs in her terminology).

- (37) a. *der mekhaber red-t mikoyekh dem targum-loshn*
 DEF.M author speak-PRS.3SG about DEF.N Aramaic
 ‘The author speaks about Aramaic.’ (CMY, Forverts)
 b. *in bukh red-t zikh fun a sakh shlekhts oykh*
 in book speak-PRS.3SG REFL from INDF lot bad.NMLZ too
 ‘The book is also about many bad things.’ (CMY, Nokhem Shtif)

7.4 Antipassive function

The pronoun *zikh* can also participate in valency changing operations. Yiddish antipassives, similar to Slavic ones, are usually formed from verbs expressing antagonistic action, be it physical or speech-related, as in (38–39).

- (38) a. *un er shel-t, shel-t zey alemen mit der*
 and 3SG.M curse-PRS.3SG curse-PRS.3SG 3PL all.ACC with DEF.F
 toykhekhe!
 curses
 ‘And he curses, curse they all with series of calamities!’ (CMY,
 Sholem Aleichem)
- b. *dos vayb shelt zikh*
 DEF.N woman curse.PRS.3SG REFL
 ‘The woman curses.’ (CMY, Sholem Aleichem)
- (39) a. *un ven du varf-st im zakh-n vet*
 and when 2SG throw-PRS.2SG 3SG.M.DAT thing-PL.ACC AUX.PRS.3SG
 er zey tsurik-breng-en
 3SG.M 3PL back-bring-FUT
 ‘And when you throw him things, he would bring them back.’ (CMY,
 Lewis Carroll, trans. Adina Bar-El)
- b. *er nosn shloyme, varf-t zikh mit gelt*
 3SG.M Nathan Shlomo throw-PRS.3SG REFL with money
 ‘He, Nathan Shlomo, splashes out money.’ (CMY, Katle Kanye)

8 Conclusions

In this chapter two variants of the reflexive pronoun *zikh* have been addressed – *zikh* and *zikh aleyn*. Their distribution according to different factors has been analyzed. The following factors were shown to come into play to determine the

choice: extroverted vs. introverted verbs, different semantic roles of the antecedent, and coreferent vs. non-coreferent uses. The choice between reflexive and personal pronouns is also influenced by the semantic roles of the antecedent. In her book on middle voice, Kemmer (1993) classifies languages based on their reflexive and middle markers. The first distinction is whether middle and reflexive markers have the same form. Sometimes their forms are not the same but related diachronically – this is known as the two-form cognate system. The shorter of these two forms is called “light” and the longer is called “heavy”. This kind of system is manifested in Slavic languages, for example in Polish (cf. Janic (2023 [this volume])). A similar observation holds for Yiddish. The language has a light form *zikh* and a heavy form *zikh aleyn*. At first glance, *zikh aleyn* is yet another contrastive construction that functions like its German and Slavic counterpart (cf. *sich selbst* in German, *sam seb'ja* in Russian), but *zikh aleyn* is used in a variety of referential contexts, not only contrastive ones. The Slavic languages that Yiddish was in contact with have a clear distinction between the pronoun expressing reference and the clitic verb markers. This fact might have contributed to the development of the *zikh aleyn* cluster, grammaticalized to replace the former bare pronoun *zikh*. Finally, bare *zikh* has an array of non-coreferent meanings that are similar to those found in Polish and Russian, which proposes areal influence in this aspect as well.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

- CONT continuative aspect
IMPERS impersonal

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Part IV

Papunesia

Chapter 15

Reflexive and middle constructions in Chini

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In this paper, I rely primarily on examples from discourse in Chini, a language of northeastern Papua New Guinea, in order to describe how reflexivity and autopathic semantic relations are expressed. First, I describe the reflexive possessive construction. I suggest that the coreferential association is between the possessor and the most topicworthy participant(s), which often, but not always, corresponds to the clause-internal subject. I then describe the middle construction and argue that its primary function is to identify the main participant in a clause as a semantic patient. The potential for autopathic readings of clauses headed by middle verb forms depends on the degree of the participant's control over the activity and furthermore involves interplays between lexical semantics and contextual interpretation. Finally, I discuss certain specialized middle constructions where the reflexive or reciprocal interpretation is made absolute.

1 Introduction

Here I describe the possessive reflexive and the middle construction in Chini, a language of northeastern Papua New Guinea (PNG). I provide background about Chini in §1.1, and my methods in §1.2. In §2, I provide an overview of relevant areas of the grammar, especially participant roles and clause structure. I describe the workings of the reflexive possessive pronoun *ŋi=* in §3, and the middle marker *nji-* in §4. I conclude in §5.



1.1 The Chini language

Chini is the traditional language of the Awaknji people of Andamang village and the Yavinajri of Akrukay. Both villages are associated with a distinct dialect, each with a social as well as geographic dimension. The villages themselves correspond to multiple hamlets on the lower Sogeram River in Madang Province, Papua New Guinea (PNG), see Figure 1.¹ Local speech practices are characterized by code-switching between Chini and Tok Pisin, the national lingua franca of PNG and areal language of shift. Currently, young adults are mostly bilingual listeners but do not actively use Chini. Most adults in their 40s and older (about 50 people) are active users, and some are multilingual in neighboring languages. Dialect differences and any Tok Pisin material are maintained in examples as they were originally said by the speaker.

Chini belongs to the Tamolan subgroup in the Ramu family (Z'graggen 1971; Foley 2005; Brooks 2018b), a grouping of at least 20 languages along the lower and middle Ramu River and in adjacent areas. Few descriptive materials are available on these languages.

1.2 Methodological background

The fieldwork on which this paper is based has been conducted across multiple trips totaling 12 months between 2012 and 2019. My fieldwork practice has ethnographic, linguistic, and documentary components. The corpus is housed at the Endangered Languages Archive (ELAR) (see Brooks 2018a for the web address). The annotated part of the corpus consists of some 15 hours of connected speech in Chini, including narrative but mostly conversation. This is supplemented by my field notes which include many key examples from unrecorded interactions.

In this paper, I describe the possessive reflexive and the middle constructions in a way that reflects Chini grammar and usage, as limited by the extent of my understanding. I rely mostly on examples from connected speech. These are identified by their location in my fieldnotes or by recordings in the Endangered Languages Archive. Examples labeled “Offered” were proposed by native speakers as appropriate utterances for me to parrot. “Elicited” examples are from targeted elicitation, either from a speaker’s translation of an attested Tok Pisin utterance, or from transcribing naturalistic speech. While all recordings have the consent of participants to be public, any examples I feel present a concern are not accompanied by identifiers. Common everyday expressions are not cited. Translations

¹Pale red denotes Trans New Guinea languages, green: Ramu languages, white: uninhabited territories.



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Figure 1: Chini in areal perspective

aim to reflect the original Chini as much as possible without being too infelicitous in English, and those that depart significantly from the Chini are labeled as free translations. Likewise, descriptive labels and glosses are not intended rigidly or as representations of universal concepts, but as tools to represent language-specific associations between form and meaning (Reesink 2008).

2 Grammatical background

Here I provide an overview of the grammar relevant to the possessive reflexive and (especially) the middle construction, namely participant categories and how their semantic and pragmatic roles relate to clause structure and valency behavior. In §2.1, I discuss the noun phrase in Chini; in §2.2 participant categories for nominals; and in §2.3, I address pragmatically-determined constituent order in main clauses.

2.1 The noun phrase

Noun phrase structure is [noun][adjective][numeral] with mostly dependent-head order in genitive constructions. The position of deictic determiners is based on semantic scope. Nominal categories include a plural/non-plural relative number distinction (where “non-plural” is semantically akin to a paucal), diminutive, augmentative, and authentic (i.e., an original version of something). Noun phrases are not flagged for core cases. Postpositional enclitics provide semantic and/or pragmatic information about the role of the noun phrase in the clause. It is not unusual for multiple enclitics to co-occur. This allows for fairly complex ideas to be expressed in a single noun phrase, including (as it relates to reflexivity) autopathic concepts. In particular, concepts involving self-reflection tend to rely on roundabout (and often, translation-resistant) expressions, without overt reflexive material. For example, Agusta said (1)^{2,3} after complaining her eyesight had become too poor to see her knitting properly.

²Certain graphemic conventions diverge from a phonemically-based orthography. Between vowels or glides, ⟨g⟩ represents the velar approximant /w/. ⟨ŋ⟩ represents /ŋ/, but ⟨ŋg⟩ represents the prenasalized stop /ŋg/. ⟨g⟩ is also used for [g], an allophone of /ŋg/ that occurs before /ŋ/. ⟨h⟩ represents the breathy voice quality of certain stops when it is phonemically contrastive (and co-occurs with ingressive airflow, which is not represented). Other instances of murmur are not represented. ⟨c⟩ occurs in ⟨cm⟩ to represent the voiceless palatal stop in the prestopped nasal /c̚m/ and in ⟨ch⟩ for the affricate /tʃ/. Other conventions include ⟨v⟩ for /β/, ⟨ñ⟩ for /n/, and ⟨nj⟩ for /ŋj/.

³Example citations indicate the source of the original utterance. In addition to the speaker’s name, an identifier like ‘afi021218m_7:09’ indicates the ISO code (afi), the date of the recording, the number of participants (s for ‘single’, m ‘multiple’), and the time stamp.

- (1) *ku paviminiŋgamika!*
 ku pa=avi=mɪŋjɪ=aŋgɪ=ami=k-a=a
 1SG.NOM before=NEW=TRANS=LH.NPL=SIM=PROX-DEF=EXCL
 ‘Who am I now, in contrast to the bright-eyed me from before?’ (Free
 translation) [Agusta Njveni, afi021218m_7:09]

2.2 Participant categories for pronouns and nouns

Whereas many Papuan languages are known for the reduced functional role of nominals in discourse (de Vries 2005), in Chini, the functional load of nouns and pronouns in referential tracking (among other uses) is high. The language has an abundance of core argument categories for object-like participants. These tend to be given lexical expression, especially instruments. As a result, nominal-heavy clauses are not as uncommon in Chini discourse as they might be in other Papuan languages. Another reason for this relates to the fact that clause chaining in Chini is not based on reference. Instead, the chain linkage devices code dependency relations that demarcate topical information from the comment, among other related discourse-pragmatic functions. This can be glimpsed in (2), where the prosody and the chain linker =va demarcate the topical background information from the following comment, which is headed by the final clause. The pragmatic unity between the two clauses in the comment is signaled by the linker =ki. In each clause, reference is clarified by pronouns.

- (2) a. *ku ḡangukŋimapava*
 ku ḡɪ=ἀngu.knɪ-m-apə=va
 1SG.NOM 3SG.DAT=ask-IPFV-R=PRE.R
 ‘I had been asking her (Dorin) but’
- b. *ani ḡirkŋi niŋaviandiki*
 ani ḡɪ=irk-ŋɪ ni=ŋɪ=avia.ndɪ=ki
 3SG POSS.REFL=talk-NPL INS=1SG.ACC=withhold.R=CNT.R
 ‘she withheld her plans (lit. her talk) from me and’
- c. *ku yanɪ pupmu kuaviyi.*
 ku yanɪ pupmu ku-avi-yi
 1SG.NOM just alone cross-TLOC.PC-R
 ‘I went all alone to the other side of the river (to collect greens).’
 [Dorothy Paul, afi051116m_15:14]

In §2.2.1, I discuss pronouns in Chini and in §2.2.2, I discuss the language-specific ways in which allatives, benefactives, and instruments act as core participants.

2.2.1 Pronouns

The Chini pronouns can be seen in Table 1 below. The initial vowel *a* in 3SG forms is maintained only in the Akrukay dialect. The nominative and dual forms are unbound, while all others are bound proclitics.

In Chini, verbs that can be used transitively (i.e., that occur with reference to object-like participants) are associated with one (or sometimes, more than one) pronominal object case. Recall that nominals are note marked for case; however, the three pronominal cases are accusative, dative, and benefactive,⁴ see Table 1.

Table 1: Pronouns in Chini

	NOM	ACC	DAT	POSS	FOC.POSS	BEN
DIST	<i>mi</i>	<i>mi</i>	<i>mi</i>	<i>mi</i>	-	<i>mbi</i>
1SG	<i>ku</i>	<i>ŋi</i>	<i>ŋi</i>	<i>ku</i>	-	<i>mbi</i>
2SG	<i>nu</i>	<i>nu</i>	<i>ŋgu</i>	<i>ŋgu</i>	<i>inku</i>	<i>ndvu</i>
3SG	<i>ani</i>	(<i>a</i>) <i>ni</i>	(<i>a</i>) <i>ŋgi</i>	(<i>a</i>) <i>ŋgi</i>	<i>anki</i>	(<i>a</i>) <i>ndvi</i>
1PL	<i>añi</i>	<i>añi</i>	<i>anji</i>	<i>anji</i>	<i>ainki</i>	<i>anjvi</i>
1/2/3PL ^a	<i>ñi</i>	<i>ñi</i>	<i>nji</i>	<i>nji</i>	<i>inki</i>	<i>njvi</i>
1DU	<i>angí</i>	<i>angí</i>	<i>angí</i>	<i>angí</i>	-	<i>b</i>
2DU	<i>ŋgu</i>	<i>ŋgu</i>	<i>ŋgu</i>	<i>ŋgu</i>	-	<i>b</i>
3DU	<i>maŋuñi</i> ^c	<i>maŋuñi</i>	<i>maŋuñi</i>	<i>maŋuñi</i>	-	<i>b</i>

^aCollective.

^bCo-occur with BEN *vi*=.

^cLit. ‘those two’, sometimes: *kajuñi* ‘these two’.

The pronouns exhibit several divisions. The 1SG *ŋi*= conflates accusative and dative case. 2SG, 3SG, and 1/2/3PL⁵ conflate nominative and accusative while distinguishing the dative. As I discuss in §2.3, constituent order in object-initial main clauses justifies grouping accusatives and datives as ‘Patients’ in the sense

⁴A handful of verbs take the benefactive, for example: *ndi*- ‘like, think of’, *anu*- ‘worry about’, *ayi*- ‘wait for’, *ki*- ‘propel, kick, throw’. Others take the dative: *ñu*- ‘chase off, after’, *angu*- ‘request information’, the sense ‘hog someone’s time, be possessive over (someone)’ of *amru*- ‘seize’, *ndu*- ‘perceive (pc)’. The majority take an accusative: *ki*- ‘tell’, *amba*- ‘take care of (someone)’, *amá*- ‘transport, take (someone somewhere)’, *ŋgin*- ‘perceive (PL)’.

⁵The collective pronouns represent any 2 or more persons as a unit. The DU and 1PL distinctive pronouns represent multiple persons in terms of some property of distinctiveness. Often the difference is subtle.

of ‘the most semantically patient-like argument in a multivalent clause’. As I discuss in §3, the reflexive possessive pronoun *ŋi=* refers to topical possessors.

2.2.2 Allatives, benefactives, and instruments as core participants

Any lexical noun (and some nominalized verb forms) having a certain semantic role of goal, beneficiary, or instrument is considered a core participant in Chini clause structure. That status is cross-referenced by a proclitic that attaches to the verb complex: allative *mi=*, benefactive *vi=*, and instrumental *ni=*. These language-specific categories exhibit some semantic variability, for instance nouns having the semantic role of goal or path count as allatives, as seen in (3).⁶

- (3) *ku Aminjari mayiki*
ku Aminjari mi=ayi=ki
_{1SG.NOM [Ramu_river]_{ALL} ALL=go/come_upriver.IRR=CNT.R}
achiki tiŋi mayuku yu.
achi-ki ti=ŋi mi=ayuku yu
{[upriver-PROX path=ADESS]{ALL} ALL=quickly go/come.IRR}
‘I’ll go upriver on the Ramu (River), going quickly on the upriver route.’
[Dorothy Paul, afi260814m_29:03]

Instruments include concrete and abstract instruments, gifts, entities manipulated by human hands, certain roles and capacities, and adverbial manner, (4).

- (4) *ka ku mmhi niminki.*
k-a ku mmhi ni=mi=nki
{PROX-DEF 1SG.NOM [bamboo]{INS} INS=DIST=light.R}
‘This (the matchwood) I lit using the bamboo.’ [Anton Mana,
afi271016m_12:17]

The benefactive indicates beneficiaries, maleficiaries, purposes, and reasons. As seen in (5), this participant category is the only one shared by pronouns and nominals (here, a nominalized verb).

- (5) *andvambrimbri varatmapaye*
andvi=ambri~mbri vi=ara-tm-apa-y-e
_{3SG.BEN=hurry~NMLZ BEN=move.along-IPFV-R-Z-CTRST}

⁶Also apparent in (3) is the possibility for a noun phrase marked by an adessive or vialis postposition to count as an allative, a grey area in the core vs. oblique distinction.

‘I was on my way in order to hurry for him but (...he had forgotten all about it).’ [Emma Airimari, afi051116m_2_15:59]

Benefactive pronouns in fact conflate Benefactive and allative functions. Pronominal recipients of directional transfers (from a source to a goal, along a path) take the benefactive form. Example (6) concerns a soccer game that had taken place.

- (6) *ndvikavi!*

ndvi=ki-avi

3SG.BEN=propel-TLOC.OPT.PC

‘Kick (the ball) to him.’ [2016 Fieldnotes, elicited example]

The basic point here is that Chini biases its users to attend to specific types of participants, including ones not always thought of as candidates for core arguments (see Mithun 2005). In the next section, I discuss some similarities and distinctions between Patients and instruments when they pattern as topics in clause-initial position.

2.3 Pragmatically-determined constituent order in main clauses

Main clauses are verb-final, and the order of nominal constituents is pragmatically-based. For transitive clauses with a semantic agent (A) and patient (P), APV is the most frequent order. As shown in (7), this word order is used when A is the default topic-worthy argument. In this exchange between a folkloric husband and wife, the P argument has no special pragmatic status; the participation is normative and unremarkable in relation to the activity.

- (7) *ŋgimani* *ŋgangukŋi* “nu ŋgu aryindani?”

ŋgi=mani **ŋgi**=angu-kŋi nu ŋgu ar-yi-nda=n-i

3SG.POSS=husband 3SG.DAT=ask-IRR 2SG fish catch-IRR-NEG=z-Q.IRR

‘Her husband asked her: “Did you not catch any fish?”’ [Frank Mana, afi260612s_1:19]

The construction that serves to activate the topicworthiness of a lexical Patient relies on clause-initial placement and a pronominal clitic cross-referenced on the verb complex.⁷ In (8), Emma activates ‘sago’ as a topic, suggesting (in jest) to her addressee that he has been remiss in his work.

⁷The distal deictic *mi*= is used mostly for non-humans. Human Patients are cross-referenced by their relevant (human) pronoun. Accusative *ŋi*= is used for the 1SG. For the 2SG, 3SG, and all PL persons, the accusative or dative is used, depending on the verb.

- (8) *anjigi nu miñu?*
 anjigi nu **mi**=ñu
 sago 2SG DIST=carve.IRR
 ‘Are you ever going to (harvest) that sago?’ [Emma Airimari,
 afi250814m_3:14]

Instrument and benefactive (but not allative) participants may appear as topics (in initial position) and are cross-referenced on the verb complex just like topicworthy Patients, as seen in (9).

- (9) *...ayi pirkī añi manimiñi.*
 ayi pir-ki añi ma=**ni**=mi=ñi
 [something bad-NPL]_{INS} 1PL FOC=INS=DIST=get.R.PC
 ‘(The money, we didn’t get it in a good way...) it was by something bad
 (by selling cannabis) that we got it.’

A topicalized object may pattern as both Patient and instrument. In (10), *vrinki* ‘reeds’ occurs in clause-initial position as a topicworthy participant. It is cross-referenced on the verb as an instrument (by the first *ni*= in the clause, whereas the second *ni*= refers to the fire as a second instrument), due to the alteration of its state by human hands. As the affected participant, it is also a Patient, as indicated by *mi*=.

- (10) *vrinki nigwu nimikavimi...*
 vrinki **ni**=gwu ni=**mi**=ki-avi=**mi**
 reed.PL INS=fire INS=DIST=throw-TLOC.OPT.PC=PRE.IRR
 ‘(Set fire to it!) Set fire to the reeds (...and then the dogs will kill the pig as
 it emerges).’ [Alfons Garimbini, afi160714m_8:43]

The Chini patterns evince a more complex array of possibilities for participant roles than the term ‘object’ implies (Mithun & Chafe 1999). At the same time, object-initial clauses do reveal a participant category of Patient.

3 The reflexive possessive construction (*ŋi=*)

In §3, I describe the uses of the reflexive possessive pronoun *ŋi=*, the only *bona fide* reflexivizer in Chini. Specifically, in §3.1, I show how the majority of utterances that employ *ŋi=* reflect the common analysis of reflexive relations in terms of clause-internal coreference (between possessor and syntactic subject). Then,

in §3.2, I discuss how other examples point to topics and (to a lesser extent) agents (rather than subjects) as coreferential with reflexive possessors. This can be seen in instances of partial coreference but also clause-external coreference, where the discourse topicality of the antecedent possessor supercedes the topicality of the subject in the clause where *ŋi=* appears. In §3.3, I discuss how uses of the reflexive marker can involve clause-external co-reference, between the possessor and a topic. This phenomenon shows that in Chini, co-reference is often but not rigidly clause-internal, i.e., as if exclusive to subject referents.

3.1 Clause-internal coreference between subject and possessor

In (11), the 2SG possessor is straightforwardly coreferential with the subject.

- (11) “*nu ŋimani kirami*”
nu ŋi=mani ki-ra=mi
2SG POSS.REFL=husband tell-OPT=PRE.IRR
“You tell your husband (...he must come down and spear the crocodile).”
[Anton Mana, afi260514s_2:28]

Note that this construction is also used for reciprocal possession (English: ‘each other’s’), as in (12) below.

- (12) *añi miyi vindi mi, añi ŋirkŋi akikina?*
añi mi-yi vi-ndi mi añi ŋi=irk-ŋi aki~ki=n-a
1PL DIST-what BEN-think DIST 1PL POSS.REFL=talk-NPL spear~IPFV=z-Q.R
‘Why do we not heed/deflect (lit. spear) each other’s talk?’ [Dorothy Paul,
afi260814m_34:55]

In general, when the possessor referent is not the subject (or established topic), a non-reflexive possessive pronoun is used (see Table 1). In (13), Emma uses the non-reflexive collective possessive *nji=* as she complains about a very relatable problem.

- (13) *ainkitwavingayi ajri njirkŋi ŋginimichinda.*
ainki=twavingayi aj-ri nji=irk-ŋi ŋgini-m-i-chi-nda
1PL.FOC.POSS=child.PL man-PL PL.POSS=talk-NPL perceive-IPFV-IRR-Z-NEG
‘The young men of ours don’t listen (lit. perceive/heed any of our talk).’
[Emma Airimari, afi260814m_34:59]

A possessor in a phrasal afterthought takes the non-reflexive form, as shown in (14). The prosodic break (here, a pause indicated by the comma) between the clause and the phrasal afterthought is enough for the latter to be treated as clause-external.

- (14) *mumujuŋuŋaki* *ivki,* *ŋgambigi.*
 mumujuŋuŋa-ki ivk-i ŋgi=ambigi
 auntie riverwards-PROX be.sitting.PC-IRR 3SG.POSS=house
 ‘Auntie (Agusta) is sitting over there riverwards, (in) her house.’ [Anton Mana, afi111016m_43:41]

Reflexive possessors need not be human, so long as the animal (15) or inanimate entity (16) is an agentive topic.

- (15) *chavi* *ŋimiatmi* *niŋaurua.*
 chavi ŋi=miatmi ni=ŋi=auru-a
 poison.frog POSS.REFL=poison INS=1SG.ACC=wash-R
 ‘The poison frog shot (‘washed’) me (in the eye) with its poison.’ [Anton Mana, 2018 Fieldnotes, offered example]
- (16) *miŋatugu* *michagiyi.*
 mi=ŋi=atugu mi=chagi-yi
 DIST=POSS.REFL=limit ALL=arrive-R.PC
 ‘It has reached its limit.’ [Anton Mana, 2014 Fieldnotes, offered example]

Note that, as shown in (17), non-reflexive animal and inanimate possessors rely on the distal deictic *mi*=.

- (17) *miyēntmi* *ara.*
 mi=yim-tmi ar-a
 DIST=chew.betel.nut-NMLZ good-R
 ‘Its (the meat of the betel nut in question) chewing is good (for getting a buzz).’ [Alfons Garimbini, 2014 Fieldnotes, offered example]

3.2 Partial coreference between topic (or agent) and possessor

Coreference can involve either full or partial identity of the possessor with the subject. In instances of partial coreference, the possessor almost always refers to the more topicworthy member within a plural subject. Ros addressed (18) to Anton and me as we emerged from the bush in her part of the village. The possessor

and topic is me (not me and Anton, since the recently deceased woman Ikivim is my classificatory grandmother but Anton's aunt). The reference of the possessor and its topicworthiness is then reinforced in the 3SG benefactive pronoun *ndvi*=.

- (18) *na ñi ñiñinmi aŋgini ndvimbriindani?*
na ñi **ŋi**=ñinmi aŋgini ndvi=mbru-i-nda=n-i
and PL POSS.REFL=maternal.ANC banana 3SG.BEN=cut-IRR-NEG=Z-Q.IRR
'Did you all really not cut off any of his grandmother's bananas for him?'
[Ros Njveni, afi111016m_44:50]

Similarly, in (19) the partial coreference is based on the topical participant within a plural subject. That participant is a (folkloric) village man, as introduced in the first clause and understood as the protagonist of the folktale. He is a subset of the plural subject (i.e., the villagers who carried the pig along with him to his homestead).

- (19) *ñi manjuraki chaki ñingigi*
ñi mi=anjur-a=kí ch-a=kí **ŋi**=ŋgigí
PL DIST=carry-R=CNT.R ascend-R=CNT.R POSS.REFL=homestead
miga...
mi=g-a
DIST=set.down-R
'They (the villagers, including the man) carried it (the pig), went up, and laid it down at his homestead...' [Paul Guku, afi100514s_12:07]

In one specialized construction, the interpretation of the reference of the possessor hinges on semantic agency rather than pragmatic topicworthiness. This construction expresses accompaniment or "attendant action" (Zaliznjak & Shmelyev 2007: 214).

Its function is based on asymmetries in agency within a plural subject, where one member merely attends the action and is not an agent. Of the two members of the subject in (20), the wife is expressed as the agent, since she is headed to her matrilineally inherited bush ground with her husband, who merely accompanies her.⁸

⁸There is an underlying cultural component that drives the use of this construction. It is often used to describe movements into the bush. In Chini society, the bush is subdivided into chunks, each associated with a particular moiety and associated subclan (spouses belong to opposing moieties.) The chunks are inherited through a system of mostly matrilineal land tenure according to moiety and clan membership. So, the agent in these situations is that person whose clan owns the land. In Chini, they are referred to as *mbipapayangi* 'the one who goes first to it'. Just as that person (the candidate for the topical agent in this construction) 'goes first', their spouse (or other associate) is seen as accompanying them.

- (20) a. *An̄gwami pata ñgimani* *mañuñi, bmu* *nigi*,
 An̄gwami pata ñgi=mani mañuñi bmu nigi
 An̄gwam̄i CONJ 3SG.POSS=husband 3DU sundown another
 mañuñi anjiḡi vuwuyi.
 mañuñi anjiḡi vu=wu-yi
 3DU sago BEN=go/come-R.PC
 'An̄gwami and her husband, those two, a day later they went to
 (harvest) sago.'
- b. *Mañuñi ñimaninmi* *avkiki* *anjiḡi*
 mañuñi ñi=mani=nmi av-ki=ki anjiḡi
 3DU POSS.REFL=husband=ACCOM descend-R.PC=CONT.R sago
 ñumapa.
 ñu-m-apa
 carve-IPFV-R
 'The two of them, (she) with her husband went down (to the bush)
 and harvested sago.' [Anton Mana, afi051116s_0:51]

3.3 Clause-external coreference between topic and possessor

The above examples of full and partial coreference uphold the general view of reflexive relations as a clause-internal matter. However, examples from Chini discourse reveal that reflexivity can involve clause-external coreference. Such uses arise when the discourse topicality of an antecedent supercedes that of the subject, for instance in long stretches of discourse like clause chains where multiple subjects are introduced. The chain in (21) is about an oxbow marsh that several Andamang villagers share with a neighboring village called Watabu. The subject in the third line below is elided, but it is clear from the context that it would be the Awakñi boys (*agnjir̄i*) fencing off the marsh. It is also clear that the discourse topic (and possessor) is not the boys themselves, but rather the Awakñi owners of their half of the marsh (Anton and his family), i.e., the 'we' from the first clause.⁹

⁹The boys, while potentially a subset of the 1PL argument in the first clause, are not so easily identified as such. The marsh belongs to a specific clan. The event has also not yet occurred, and the boys represent multiple clans. So, these two referents turn out to represent separate topics. Comrie (1999) points out how breaks in topic continuity often motivate the use of more marked pronominal forms to reactivate the discontinuous topic. However, Chini does not distinguish pronouns in this way.

- (21) a. *añi ñiyärkŋi* *ndumi*,
 añi ñi=yärkŋi ndu=mi
 1PL POSS.REFL=side.of.things perceive.PC.MOD=PRE.IRR
 ‘We need to attend to our side of things so,’
- b. *agŋiŋri* *rindata* *vieni*
 agŋi-ŋri ri=nda-ta vieni
 post.initiate.boy-PL head.downriver.MOD=SEQ-IRR sago.palm.frond
 agarindata,
 ag-ari=nda-ta
 cut-MOD=SEQ-IRR
 ‘once the (older) boys have gone downriver and cut dried sago palm
 fronds and,’
- c. *ŋangti* *tiri mi...*
 ŋi=angti ti-ri=mi
 POSS.REFL=LH.NPL cut.PC-MOD=PRE.IRR
 ‘fenced off (lit. cut) ours (side of the marsh)...’ [Anton Mana,
 afi260814m_1:57]

For the possessive reflexive construction, coreference most often involves full identity between the possessor and the topical subject. Partial coreference and the possibility for clause-external coreference with a topical antecedent reveal that possessive reflexivity may be more complex than clause-internal relations between syntactic categories. Where clause-external coreference is concerned, some explanation may be found in the potential for newly introduced subject participants to be ephemeral in discourse vs. topics which are established as given and definite, and thus more highly recoverable from context (Lambrecht 1994). In other words, highly topical participants enjoy high candidacy for coreference as reflexive possessors, and may in that capacity override subjects (cf. Reesink 1983).

4 The middle construction (*nji*)

Here I describe the workings of the Chini middle, formed by the verbal prefix *nji-* (or the proclitic *nji-* in a few specialized constructions discussed in §4.2.2). There are no reflexive pronouns beyond the possessive *ŋi*; therefore, the middle construction is the primary grammatical expression for autopathic and mutual relations. The function of the middle is to represent the action of the verb events as affecting (rather than being fully controlled by) the main participant. That

is, the main participant in a middle-marked clause is essentially a semantic patient.¹⁰ My main focus here will be to illustrate how this function interrelates with autopathic and mutual semantic readings. I argue that those readings are strongest when the main participant has significant control over the action, and much weaker when they are perceived to have less control.¹¹

The current documentation records 70 middle verb forms in Chini, which corresponds to approximately 20% of the verbal lexicon (where middles are considered separate lexemes, either as deponents or as derivations of non-middle counterparts). Historically, the Chini middle appears to predate the diversification of the Tamolan subgroup. This is hinted at by cognate middle forms and their unmarked transitive counterparts for ‘bathe’ and ‘wash’ in Chini’s nearest relatives (Z’graggen 1974). The historical relation to the plural collective dative pronoun of the same form, *nji-* (see Table 1), is unclear, but the two are almost certainly related. In what follows, I give a brief overview of the transitivity patterns of middles §4.1. In §4.2, I discuss the semantics of middles in terms of how the presence, absence, or mitigated control yields differences with respect to autopathic (and/or mutual) interpretations.

4.1 Transitivity patterns and argument structural behavior of middles

Middles exhibit a range of possibilities with respect to their unmarked counterparts, as shown in Table 2.

Note that the evidence does not quite support an analysis of *nji-* as a syntactic valency-decreasing device.¹² While most middles may have transitive counterparts, this reflects the much greater proportion of transitive-patterning to

¹⁰Middle situation types in Chini correspond mostly to Kemmer’s (1993, 1994) findings, with some exceptions. In Chini, middles are mostly not used for changes in body posture, emotive speech actions, cognition, or grooming. Chini middles are characterized somewhat by lexical idiosyncrasy. The generic verbs for ‘grow’ include a middle for human and animal growth, but an unmarked intransitive for plant growth.

¹¹By ‘mutual’ events I refer to Nedjalkov’s (2007) work on reciprocals, where participants act “to/of/against/from/with each other”, as shown earlier in (6). I generally follow Haspelmath (2023 [this volume]) in reserving “reflexive” and “reciprocal” for grammatical markers. I also use them to refer to those middles where reflexive or reciprocal meanings are always involved. For middle verbs where such meanings are more tenuous or a matter of interpretation, I use the terms “autopathic” and “mutual”.

¹²Transitivity in Chini is best described as semantically-based. The coding frames and argument structural combinations of any given verb depend to a great extent on lexical semantics. For some verbs, the patterns generally cohere with the semantic maps fine-tuned by Comrie et al. (2015). However, area- and language-particular conceptualizations of verbal meanings also play a major role (cf. Pawley 2000). For example, the verb *ām-* ‘cook’ never indicates an accomplishment, only an (intransitive) activity. The affected participant of *mu-* ‘become dusk’ is

Table 2: Transitivity patterns for unmarked counterparts

Transitivity pattern of counterpart	Unmarked counterpart	Middle form
Unknown counterpart (Deponent forms)		<i>njimim-</i> ‘urinate, shoot projectile poison’ <i>njagi-</i> ‘paddle (a canoe)’
Intransitive	<i>ch-</i> ‘exist, live, be left/remain’ <i>pu-</i> ‘get upset’	<i>njich-</i> ‘exist unto itself/oneself, let something/someone be, never mind’ <i>njipu-</i> ‘thrash about, get all riled up’
Ambitransitive	<i>mbin-</i> ‘last (time); well up (water); increase in pressure; pressure someone; stop by pressing (e.g. a recorder)’ <i>pu-</i> ‘float; set afloat, adrift (TLOC)’	<i>njimbín-</i> ‘dry up (e.g. a swamp)’ <i>njipu-</i> ‘drift off (downriver) (TLOC)’
Transitive	<i>yiriv-</i> ‘turn (something) over’ <i>yu-</i> ‘pick/lift up’	<i>njiyiriv-</i> ‘avert one’s gaze’ <i>njiyu-</i> ‘jump up, onto’

intransitive-patterning verbs in the lexicon. The presence of intransitive counterparts and the occasional unpredictability of the argument structural alternations that occur between transitive-middle pairs suggest that *nji-* does not function to decrease valency (even if decreased valency is often characteristic of clauses headed by middles). The middle form *njiyiyiyi-* means ‘scratch (oneself)’ but its

obligatorily (transitively) expressed (*bmu njimu* ‘dusk dusked me’). For some ambivalent verbs, intransitive and transitive uses hardly differ: *nju-* ‘bear offspring (INTR); give birth to (TR)’. For others, intransitive vs. transitive meanings are more distinct: *nji-* ‘reside, be settled, settle (one’s body) into a spot (INTR)’ but ‘set something down in upright position; plant sweet potato, taro, sugar cane, greens (TR)’.

transitive counterpart *yiyiyi-* means ‘itch’ as in “my skin itches me” (and not: “(someone else) scratches me”). As in (24) in §4.1.1, some middles can even take patient-like objects. The patterns can be understood as syntactic effects of underlying semantic principles.

4.1.1 Argument structural behavior of middles

In §2.2.1, I described how verbs that take an object-like participant are associated with accusative, dative, or benefactive participant categories. It is precisely these argument types that rarely co-occur with middles. This can be seen in the middle forms of the paucational (22) and pluractional (23) roots for ‘perceive, know’. The former (*ndu-*) specifies a dative, the latter (*ŋgin-*) an accusative. The erstwhile benefactive is exemplified in (24). Reflexive (or reciprocal) relations can be based on coreference between the subject and any of these three object-like participant types:

(22) Erstwhile dative

<i>agŋinjri</i>	<i>agamki njinduindaka...</i>
<i>agni-ŋri</i>	<i>agamki nji-ndui=nda-ka</i>
post.initiate.boy-PL all	MID-perceive.PC.R=SEQ-R
‘All the boys looked at each other and then...’ [Anton Mana, afi021218m_27:16]	

(23) Erstwhile accusative

<i>agŋinjri</i>	<i>agamki njingininda.</i>
<i>agni-ŋri</i>	<i>agamki nji-ŋgin-i-nda</i>
post.initiate.boy-PL all	MID-perceive.PL-IRR-NEG
‘None of the boys looked at each other.’ [2018 Fieldnotes, elicited example]	

(24) Erstwhile benefactive

<i>ani ŋimiŋi ninjikavi.</i>
<i>ani ŋimiŋi ni=nji-ki-avi</i>
3SG black INS=MID-propel-TLOC.R.PC

‘He painted himself black.’ [2014 Fieldnotes]

As (24) also illustrates, middle clauses need not have monovalent argument structure. The most common multivalent pattern is the inclusion of an instrument. Although object-like participants are generally absent in middle clauses, it is nevertheless possible for some middles to co-occur with a patient-like argument. Consider the use of *njag-* ‘surpass, put clothes on upper body’ in (25).

- (25) *achami njara!*
achami nji-ara
clothing.item MID-put.clothes.on.upper.body.OPT
'Put a shirt on!' [Anton Mana, 2014 Fieldnotes, offered example]

4.2 Uses of the Chini middle

Uses of the Chini middle have in common the expression of a general type of action where, whatever degree of control the main participant has, they become affected or altered by it in the course of their participation. In §4.2.1, I discuss how, while the majority of uses and lexical meanings include reflexivity (or reciprocity), that inclusion hinges upon the degree of control of the agent. In §4.2.2, I discuss extensions of middle marking.

4.2.1 Three semantic subtypes of Chini middles

In §4.2.1.1, I discuss reflexive and reciprocal middles, where the main participant is equally agent and patient. In §4.2.1.2, I discuss unaccusative middles, where the main participant is purely a patient. In §4.2.1.3, I discuss the partially autopathic middles for verbal actions where the control of the agent is mitigated or otherwise ambiguous.

4.2.1.1 Reflexive and reciprocal middles

A common understanding of middles is a situation where “the participant both performs and undergoes the event” (Lichtenberk 2007: 1563). This is the most general and frequently encountered situation type for Chini middles, both in discourse and as represented in the lexicon. Drawing on Kemmer’s (1994) notion of the relative elaboration of events in terms of participants, three possibilities in Chini are shown in Table 3. While some events are interpretable as autopathic (agents acting upon themselves), others are mutual (agents acting upon each other), while some may be interpreted either way as dependent on context.

While the autopathic or mutual reading of many middle verb forms is uncontroversial (e.g., *njiña-* ‘hide oneself’), some arise via a Chini-specific interpretation of events. The middle form *njaku-* is used to express (among other things) the sprouting of a plant. Upon comparison with its transitive counterpart *aku-* ‘pull (something) out’, the Chini expression of a plant sprouting (*njaku-*) involves the (conceptually autopathic) action of the plant “pushing itself out”.

Unlike reflexive constructions in many European languages for instance, in Chini, middles rarely involve part-whole relations, but there are a handful of

Table 3: Autopathic and mutual interpretations of reflexive middles

Transitive counterparts (unmarked)	Middle-derived forms (<i>nji-</i>)	Elaboration of events
(unknown counterpart)	<i>njag-</i> ‘surpass, put shirt on (oneself)’	Strong autopathic interpretation
	<i>njingi-</i> ‘put trousers on (oneself)’	
<i>aku-</i> ‘pull (something) out’	<i>njaku-</i> ‘push (oneself, itself) out, sprout’	
<i>ñā-</i> ‘hide (something)’	<i>njiñā-</i> ‘hide (oneself)’	
<i>aigñ-</i> ‘write, draw’	<i>njaigñ-</i> ‘decorate (oneself, each other) in traditional paint, garb (for dance songs)’	Strong autopathic or mutual interpretation (based on participant number, context)
<i>apri-</i> ‘teach (someone)’	<i>njapri-</i> ‘learn (teach oneself, each other)’	
<i>yiru-</i> ‘declare, call out, name’	<i>njiyiru-</i> ‘designate (oneself, each other)’ (also ‘claim’)	
<i>auru-</i> ‘wash (something)’	<i>njauru-</i> ‘bathe (oneself, each other)’	
(unknown counterpart)	<i>njingi-</i> ‘race (each other), talk over (each other)’	Strong mutual interpretation
	<i>njigwri-</i> ‘argue’	
<i>aki-</i> ‘marry (one’s partner)’	<i>njaki-</i> ‘marry (each other)’	
<i>achim-</i> ‘amass, collect gather’	<i>njachim-</i> ‘meet (up), gather (each other)’	
<i>agi-</i> ‘press against, push (someone)’	<i>njagi-</i> ‘be stuck, crammed together’	
<i>ayi-</i> ‘help (someone) out’	<i>njayi-</i> ‘help (each other) out’	

middles that do. In addition to the differentiation between clothing one's upper (*njag-*) vs. lower body (*njingi-*) (both deponent forms), transitive *yiriv-* 'turn (something) over' pairs with the middle *njiyiriv-* which means 'avert (one's) gaze (i.e., in shame)'. The transitive verb *ti-* 'plant a garden, tubers' has a middle counterpart *njiti-* with part-whole semantics related to self-decoration, as shown in (26).

- (26) *ayemŋra ninjitiga.*
ayemŋr-a ni=nji-ti-ga
bird.of.paradise-NPL INS=MID-plant-R
'...planted bird of paradise (feathers) (in their own hair).' [Ayirivi Mana,
afi140514s_4:47]

In Chini, some situations commonly expressed by reflexivizers or middles cross-linguistically are expressed by other means, for instance by unmarked intransitives (e.g., *ambia-* 'boil'). Some situations are hardly expressed at all. What might be normal autopathic construals of events for an English speaker can prove absurd in the Chini sociocultural world (e.g. 'giving a gift to oneself'). Certain private autopathic actions like 'speaking to oneself' are in Chini expressed in terms of 'doing X alone'. It is only once multiple participants are involved, that a middle form can be used to express the event (and then, to express mutual relations), as shown in (27).

- (27) *apwati mikiniŋirati... ma aŋi iki njichi.*
apwati mi=ki-nini-ra-ti m-a aŋi iki nji-ch-i
out.in.the.open ALL=propel-TLOC-IRR-NEG DIST-DEF 1PL only MID-talk-IRR
'Don't throw it out in the open... that, we shall only discuss amongst
ourselves.' [Ayirivi Mana, afi040814m_29:58]

While the use of socially antagonistic verbs ('hate/kill/criticize/demean oneself') to express certain autopathic actions is standard in many languages, Chini linguistic practices (including in Tok Pisin) do not make use of such intentionally self-destructive concepts, at least not in overtly autopathic terms. A few middle forms do involve mutual actions with socially antagonistic verbs: *njaki-* 'fight' (based on its transitive counterpart *aki-* 'attack, shoot with spear/arrow'), and the deponent form *njigwri-* 'argue'.

4.2.1.2 Unaccusative middles

Unaccusative middles involve a main participant that exerts no control over the situation that affects them. If an agent is involved, they are clause-external. Their

defining characteristic is how straightforwardly their meanings are copied from their unmarked transitive counterparts (see Table 4 below). Haspelmath's (2017) distinction between 'automatic' and 'costly' unaccusative meanings is useful here. The unaccusative middles in Chini refer (mostly) to automatic situations (i.e., which need not involve external energy input) while their transitive counterparts refer to costly situations (and require external energy input). At least three situation types are distinguished.

There is one verb whose event type is outside those identified in Table 4. Uses of the unmarked (ambitransitive) verb *mba-* 'deceive, mislead, do/behave improperly' imply control of the main participant over the deception (including telling an actual lie), as in (28).

- (28) *na nu minigi ndvirkiki*
na nu mi=nigi ndvi=ir-ki=ki
 and 2SG DIST=another 3SG.BEN=cut.PC-R=CNT.R
mbāmhichi?
mba-mh-i=ch-i
 mislead-IPFV-IRR=Z-Q.IRR

'And as if you had cut some (savory bananas) for him, now here you are being misleading (i.e., acting as if he had behaved properly according to expectation).' [Ros Njveni, afi111016m_44:52]

In contrast, uses of the middle form *njimba-* 'deceive, be wrong, do/behave improperly' imply the absence of control (i.e., intentionality) in the act of deception (or the improper behavior). In (29), Emma informs Dorothy that she found the strainer she had at first forgot she had brought over for them to cook with.

- (29) *ku njimba.*
ku nji-mb-a
 1SG.NOM MID-deceive-R
 '(I brought it down, here it is here it is), I was wrong.' [Emma Airimari, 051116m, 22:44]

Chini thus makes use of the middle to make important semantic distinctions, for instance willful vs. accidental behavior.

Unaccusative middles generally preclude autopathic or mutual readings (unlike reflexive and reciprocal middles §4.2.1.1 and autopathic causal middles §4.2.1.3). For example, when the sediment base of the riverbed surfaces on a canoe journey, no use of the middle form *njiyu-* 'surface' can be conceived of in

Table 4: Unaccusative middles

Unmarked counterparts ^a	Middle-derived forms (<i>nji-</i>)	Situation type
<i>vua~ - *</i>	<i>njivuā-</i> ‘break, burst, crack (via multiple fissures or holes)’	Unaccusative destruction
<i>aivi-</i> (PC), <i>ayima-</i> (PL)*	<i>njaivi-</i> (PC), <i>njayima-</i> (PL) ‘break and collapse (tall narrow things)’	
<i>irk-</i> (PC), <i>mbu-</i> (PL)*	<i>njirk-</i> (PC), <i>njimbu-</i> (PL) ‘break, cut (into separate parts)’	
<i>ŋu-</i> “(Eng. fell)”	<i>njiru-</i> ‘fall (mature, non-palm trees only)’	
(unknown counterpart)	<i>njiyivr-</i> ‘grow, change in size’	Unaccusative appearance
<i>vr-</i> ‘be unable or unwilling to perceive or use’	<i>njivr-</i> ‘become unrecognizable’	
<i>aqi-</i> ‘split into separate parts’	<i>nqagi-</i> ‘split, fork (a road or river)’	
<i>yu-</i> ‘pick/lift up’	<i>njiyu-</i> ‘(re)surface (the riverbed)’	
<i>ki-</i> ‘remove from enclosed space’	<i>njiki-</i> ‘come loose, fall from enclosed space’	Unaccusative movement
<i>pu-</i> ‘float in place (TLOC, INTR), set adrift (TLOC, TR)’	<i>njipu-</i> ‘be adrift (TLOC)’	

^{a*} indicates identical meaning for transitive counterpart except in terms of agency.

terms of the sediment resurfacing or lifting itself. It is always the external agent of the receded water level that is to blame.¹³ However, for a few verbs there are occasional exceptions where an autopathic (30) or mutual (31) interpretation is possible. These arise when external control is obliquely present in the context of the utterance.

- (30) *ani njichi.*

ani nji-ch-i
3SG MID-exist-IRR

‘(He’s sleeping) leave him be (“let him exist unto himself”).’ [2018 Fieldnotes, elicited example]

- (31) *minjagwuwa.*

mi=nji-agwu-ga
DIST=MID-put/pile.inside-R.PL

‘They (the dried tobacco leaves) are overly piled up (i.e., on each other).’ [Dorothy Paul, afi151116m_35:54]

4.2.1.3 Mitigated control and partially autopathic middles

This middle subtype refers to verbal meanings where the control of the agent is mitigated by some external force or is somehow otherwise ambiguous. For these situations, the question of the main participant’s control over the activity may be less straightforward than clear presence (§4.2.1.1) or absence (§4.2.1.2). As I discuss below in §4.2.1.3.2, there is a tendency for partially autopathic readings, though this is not always the case. The verbs in Table 5¹⁴ give an initial impression. In contrast, in §4.2.1.3.1, I discuss verbal activities involving mitigated control of the agent, that is, where their erstwhile semantic agenthood gives way to patienthood as the activity they initiated comes to affect them in some key way.

4.2.1.3.1 Mitigated control

Mitigated control over the action is especially true of activities where the participant exerts agentivity as an initiator of the action, but then loses control in some

¹³Just like other verbs, middles can be polysemous. The unmarked transitive *yu-* ‘pick, lift up’ is not polysemous. Its middle form is: *njiyu-* ‘resurface (the riverbed); jump up, onto’.

¹⁴A number of middle verbs of motion and of bodily function listed in Table 5 may first appear to represent instances of lexical idiosyncrasy, something understood to be characteristic of middles (Kemmer 1994). Part of my argument in this section, however, is that the marking of some verbs as middles may not be idiosyncratic as it seems, but is instead due to semantic properties like mitigated control.

Table 5: Middles involving mitigated or ambiguous control

Unmarked counterparts	Middle-derived forms (<i>nji-</i>)	Situation type
<i>ambiñ-</i> ‘laugh at (someone) (i.e., with amusement)’	<i>njambiñ-</i> ‘laugh’	Externally-oriented bodily function or emotion
<i>pu-</i> ‘be upset (at someone, about something)’	<i>njipu-</i> ‘get (oneself) riled up (i.e., over something), thrash about in anger’	
(unknown counterparts)	<i>njumia-</i> ‘vomit’	
	<i>njimim-</i> ‘urinate, shoot projectile poison (frogs)’	
	<i>njavi-</i> ‘defecate’	
	<i>njimbovi-</i> ‘burp’	
	<i>njagi-</i> ‘paddle (a canoe)’	Action or state leading to further action or state
	<i>njigwuniji-</i> ‘dance about (with each other) (TLOC)’	
	<i>njari-</i> ‘be off, get up to leave’	
	<i>njinku-</i> ‘do repetitive back-and-forth or up-and-down motion (e.g. swing, see-saw, do pull-ups)’	
	<i>njiriv-</i> ‘jump down, off’	
	<i>njangu-</i> ‘(cause, allow oneself to) waste time, dilly-dally’	
<i>yu-</i> ‘pick/lift up’	<i>njiyu-</i> ‘jump up, onto’	
<i>ayvu-</i> ‘reduce (something)’	<i>njan(v)u-</i> ‘bend (oneself) down’	
<i>ñi-</i> ‘get, retrieve (someone or something)’	<i>njiñi-</i> ‘for something to make contact with itself via movement, especially back-and-forth’	
<i>yim-</i> ‘chew betel nut (the action of chewing it)’	<i>njiyim-</i> ‘chew betelnut (and experience its narcotic effect)’	

way to become affected by the outcome. Chewing betel nut includes not only the agentive process of combining the ingredients and physically chewing them, but also a chemical reaction resulting in a slightly narcotic effect and heightened sociability. So, the participant is construable as a patient in the chemical and social process, and this is reflected in the grammar of the Chini middle. The transitive verb *yim-* ‘chew betel nut’ and its corresponding middle form *njiyim-* ‘chew betel nut’ subtly distinguish the two possibilities for this event in terms of control. To indicate only the action of the chewing without reference to the chemical or social effect, the transitive form is used, as in (32).

- (32) *nu miagi yiminikaya*
nu mia-gi yim-i-n-i=ka=ya
 2SG betel.nut-NPL chew.betel.nut-IRR-NMLZ-NPL=PROX.DEF=TOP
 ‘Given that you’re in the middle of chewing betel nut like that...’ [Emma Airimari, afi260814m_2:48]

In contexts like (32), the complete control of the agent over the act of chewing the betel nut (vs. spitting it out) is subtly expressed by the transitive form.

When the middle form is used, it is instead the semantic patienthood of the main participant that becomes subtly present. For example in (33), a couple of people saw I was chewing betel nut from across the way. In their question as they smiled and shouted over to me, they used the middle form *njiyim-*, thereby referring to the full process of chewing betel nut including its positive psychosocial effects.

- (33) *nu njiyimkiyi?*
nu nji-yim-ki=y-i
 2SG MID-chew.betel.nut-R=Z-Q.IRR
 ‘Are you chewing betel nut (i.e., and feeling pleasant/chatty)?!’ [2016 Fieldnotes]

Differing degrees of control might help explain some cross-linguistic differences in terms of which situation types get marked as middles. (Kemmer 1993, 1994) describes the cross-linguistic tendency for middles to be used in situations of translational and non-translational motion, including posture. But in Chini, only those motions and postures where the control of the main participant is mitigated count as middles. Going/coming (*anji-*), heading upriver (*agi-*), down-river (*ri-*), sitting down (*pi-*) and many others typically involve an action over which the main participant has full control, and where the main participant is not

necessarily drawn into further subsequent activity. In contrast, bending down (*njan(v)u-*) requires that one eventually bend back up; jumping up (*njiyu-*) or down (*njiriv-*) leads to some further trajectory, as does getting up to leave (*njari-*) – which leads, inevitably, to that person leaving. For some verbs, especially of motion and posture, the participant's control may be seen as only minimally compromised (e.g. swinging or paddling). For others, it may be more strongly compromised. Bodily functions arguably fall into this category. Only those bodily functions where some degree of control is (at least initially!) exerted (see Table 5) occur as middles. Bodily functions seen as involving no exertion of control occur as unmarked intransitives (*ayi-* 'sneeze' and *chā-* 'cough').

4.2.1.3.2 Partially autopathic readings

Here I discuss how motions, postures, bodily functions and other situation types involving a loss of control are readily interpretable in terms of partial autopathy. Lexical semantics can prove quite important to understanding why certain verbal events expressed by middles have autopathic readings. For middles of motion and posture, the potential for autopathic readings could be related to resultative semantics. Where resultatives express a "state produced by the corresponding action" (Kozinsky 1988: 498), middles like *njinku-* 'swing back and forth' and *njiyim-* 'chew betel nut' express a secondary action or change of state produced by the initial action of the verb. So, one's choice to participate in an event leading to a loss of control allows for a reading of partial (or mitigated) autopathy. This principle is also evident in the semantic differences between some middle forms with their transitive counterparts (e.g., *yu-* 'pick, lift up' vs. *njiyu-* 'jump up, onto' in the sense of 'pick, lift oneself up, onto' and *aryu-* 'reduce (something)' vs. *njan(v)u-* 'bend down, over' in the sense of 'reduce oneself').

For some middles, however, the felicitousness of an autopathic reading may be more questionable as a matter of context or even individual interpretation. Consider the (deponent) middle verb form *njagi-* 'paddle (i.e., oneself, each other along)'. Participation involves dipping and pushing the oar, at which point the resulting force of the push propels the canoe and its occupant(s) across the water. Another example is *njambiñ-* 'laugh'. It derives from its transitive counterpart *ambiñ-* 'laugh at (someone)'. On the one hand, laughter can involve a loss of control. Yet one can spur oneself and (especially) others to laughter, leading to the possibility for autopathic or mutual readings for the middle form ('make oneself/each other laugh'). As in other languages, the control of main participants in emotional-psychological states and also excretive bodily functions can be seen as

ambiguous, though context often resolves any apparent ambiguity in the lexical semantics.

I have described how the Chini middle functions to express the main participant in a clause as a semantic patient. Along the way, I have argued that the intertwining of autopathic (and mutual) meaning arises as a secondary semantic effect. The more control the main participant is understood to exert, the more felicitous the autopathic reading is likely to be. The link is not grammatically rigid, but rather depends on the interplay between lexical semantics, context, and interpretation. While the division of three subtypes I have proposed here is in one sense a mere artefact of my description, it arguably reflects differences in control across middle situation types.

4.2.2 Extensions of middle marking

In a few constructions, the middle marker attaches not as a verbal prefix but as a proclitic to the verb complex. In that capacity it functions as a reflexivizer or reciprocal marker. While I have argued that the middle marker is not in fact a reflexivizer but that autopathic and mutual interpretations of middles arise as a secondary feature of the main participant's limited control over events, in these constructions, the autopathic and/or mutual meaning appears to be what motivates the presence of the middle marker.

In §4.2.1, I mentioned bodily functions as a common middle situation type in Chini and alluded to the related squeamish theoretical question of how construable those events are in terms of autopathy and control. In contexts where one participant is negatively affected by the bodily functions of another, the entirety of the action is not construable as autopathic (even if the bodily function itself is), as shown in (34).

- (34) *minimhinjavia.*

mi=ni=mhi=nji-avi-a
DIST=3SG.ACC=FOC.ALL=MID-defecate-R

'It (the puppy) pooped on her.' [2018 Fieldnotes, elicited example]

Bodily functions become undeniably autopathic in those unfortunate situations when the main participant is both agent and patient. This is expressed in Chini by a construction where the middle marker is introduced by the focused allative. This 'double middle' construction is restricted to those pronominal person-number combinations that distinguish a dative case, (35). (1sg and all dual participants require the expected accusative or invariant pronominal forms instead of the middle marker).

- (35) Reflexive ‘double’ middle

ani vrimi njimhinjimimki.

ani vrimi nji=mhi=nji-mim-ki

3SG mistakenly MID=FOC.ALL=MID-urinate-R

‘S/he mistakenly urinated on him/herself.’ [2018 Fieldnotes, elicited example]

Finally, the middle marker occurs as part of the reciprocal comitative construction (36), and the reciprocal sociative construction (37).¹⁵

- (36) Reciprocal comitative

aŋgi njingi yu.

aŋgi nji=ŋgi yu

1DU MID=COM go.IRR

‘We two will go with each other.’

- (37) Reciprocal sociative

aŋgi njavigi yu.

aŋgi nji=avigi yu

1DU MID=upper.arm go.IRR

‘We two will go together (i.e., side by side, in friendship, etc.).’

5 Conclusions

In this paper I have described those constructions in Chini where autopathic (and/or mutual) relations between participants figure prominently in linguistic expression. One is the reflexive possessive construction, where the form *ŋi=* is based on coreference between the possessor and the topic (whether subject or otherwise) or semantic agent.

The other is the middle construction. Middles can be distinguished in terms of the differing degrees of agency of the main participant, whether agency is more or less present (§4.2.1.1), absent (§4.2.1.2), or mitigated (§4.2.1.3). The Chini middle is not used to indicate autopathic relations between participants per se, but rather indicates the semantic patienthood of the main participant across different types of situations. Autopathic (and mutual) readings are possible to the extent that the main participant exerts full or partial control over the action or as permitted by lexical semantics and/or the context of the utterance. Yet autopathic

¹⁵As Zaliznjak & Shmelev (2007: 213) describe for Latin, the sociative in Chini expresses “participation on equal grounds”.

meaning is deeply bound up with the Chini middle. That this is true is seen in the extensions of middle marking to other constructions, namely the double middle for accidental bodily functions, and the reciprocal comitative and associative constructions (§4.2.2).

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ACCOM	accompaniment	PL	plural nominal number
ADESS	adessive		or pluractional verbal number
ANC	ancestral		
CNT(.R/IRR)	continuity of information	PRE(.R/IRR)	presuppositional information
CONJ	conjunctive	Q(.R/IRR)	question suffix
CTRST	contrastive	R	realis mood
LH	light head	SEQ(.R/IRR)	temporal succession
MID	middle	SIM	simulative
MOD	modal verb base	TLOC	translocative
NEW	newly-experienced		directionality
NPL	non-plural nominal number	TRANS	translational directionality
OPT	optative mood	Z	category-conditioned
PC	paucactional verbal number		suffix form that marks a wide range of clause types

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Chapter 16

The middle template and other ways of expressing coreference in Komnzo

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Coreference in Komnzo is expressed by various elements of verbal and nominal morphology. Komnzo verb morphology provides a middle construction to express coreference between the agent and the patient argument. Coreference that involves oblique arguments makes use of nominal enclitics for contrastive focus and emphasis. Long distance coreference is always ambiguous in Komnzo. Most notably, the grammatical markers found in coreference situations function at a much broader level, i.e. they are coexpressive for related meanings. In most cases, coreference has to be inferred from the context. This chapter argues that there is no dedicated reflexive construction and no dedicated reflexive marker in Komnzo. The argumentation is based on a corpus of natural speech.

1 Introduction

This chapter describes the expression of various types of coreference in Komnzo, a language of southern New Guinea. Komnzo has no dedicated reflexive construction and no set of reflexive pronouns to encode coreference. Instead verbs employ an inflectional pattern which I call the “middle template”. The middle template is used for situation types which have been described as typical middle situation types (Kemmer 1993), for example intransitive, reflexive, reciprocal, impersonal, and passive situation types. In addition to the middle template, a number of other factors are important for the expression of a reflexive situation, e.g. the case frame, the semantics of the verb lexeme, and the context. I argue here that the category “reflexive” is not a language internal category in Komnzo.



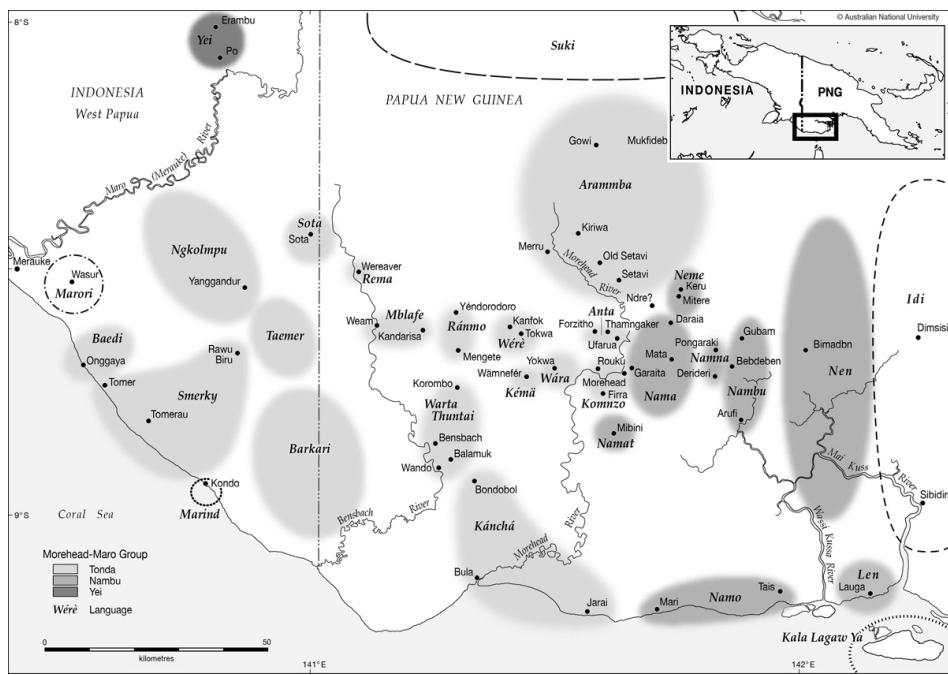
Instead coreference is encoded by grammatical means that are much broader in their function.

This article is structured in the following way: §2 provides background on Komnzo and situates the language within the Yam language family. §3 explains about the nature of the data on which this article is based. §4 introduces the relevant grammatical structures: distributed exponence (§4.1), morphological templates (§4.2), pronominals (§4.3) and enclitics (§4.4). The main part of the article provides examples of reflexive situations (§5), that is coreference between agent and patient (§5.1), coreference that involves other semantic roles (§5.2), and coreference across clauses (§5.3). §6 summarises the structures and offers a conclusion.

2 Komnzo within the Yam languages

Komnzo belongs to the Yam language family (formerly known as Morehead-Maro group), which is found in the south of the island of New Guinea. Yam languages are spoken on both sides of the border that divides Indonesia and Papua New Guinea. The language family comprises three subgroups: Nambu languages in the east, Tonda languages in the west, and Yei in the north, which is a family-level isolate. Komnzo is the easternmost language of the Tonda subgroup. Together with Anta, Wára, Kánchá, Kémä and Wèré, it belongs to the Eastern Tonda dialect chain (Döhler 2018: 36). Komnzo is spoken by around 250 speakers in the village of Rouku and Morehead Station. Figure 1 provides a map of the Yam language family.

The Southern New Guinea region stretches from the mouth of the Fly River in the east to the Digul River in the west. Despite a growing interest in the region, the level of documentation of Yam languages is still low compared to other languages families in New Guinea, not to speak of other regions of the world. Over the last decade, a number of researchers have published on specific features of Yam languages, for example their unique senary number system (Donohue 2008; Evans 2009; Hammarström 2009; Plank 2009), their complex patterns of verb inflection with respect to TAM (Siegel 2015; Evans 2015a) and valency (Evans 2015b; Siegel 2017). There are two grammars available of individual Yam languages, namely Komnzo (Döhler 2018) and Ngkolmpu (Carroll 2016). There is the Nen dictionary (Evans 2019) and text collections for Nen (Evans 2010-2015) and Komnzo (Döhler 2010-2015). Finally, there are two overview articles of the Southern New Guinea region (Evans 2012; Evans et al. 2017).



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Figure 1: The Yam language family

3 Methods and data

The data discussed in this chapter has been collected during 16 months of fieldwork between 2010 and 2015 as part of the author's PhD project. The project resulted in a grammar of Komnzo (Döhler 2018), a dictionary and a text corpus. For this article, the author revisited his field notes and texts taking inspiration from the questionnaire for reflexive constructions developed by Janic & Haspelmath (2023 [this volume]).

The examples in this article are either elicited or taken from the text corpus. The corpus comprises 12 hours of transcribed and translated speech of various text genres, including both natural and stimuli-based narratives, procedurals, conversations and public speech (see Table 1). All corpus examples are marked with a source code that has been formatted in the following structure: tciYYYYYM-MDD SSS ##. The first part identifies the transcription file: the three letter ISO 639-3 code for Komnzo (tci) and the date of the recording (YYYYMMDD). The second part identifies the annotation within the transcription file: the tiers are sorted by speaker (SSS) and the annotation number on the respective tier (##).

Note that only 8 out of 12 hours have been interlinearized at the current stage. Evidence about the frequency of individual verb lexemes in this article is based on the interlinearized subset of the corpus.

Table 1: Database (in hh:mm:ss)

Text type	Transcribed	Interlinearized
Conversation	01:01:55	-
Stimulus task	01:49:51	01:26:43
Narrative	06:14:18	05:45:15
Procedural	02:11:36	01:02:44
Public speech	00:42:38	-
Total	12:00:18	08:14:41

The corpus can be accessed in two ways. The complete collection has been archived with The Language Archive, Nijmegen (Döhler 2010–2015). It includes around 60 hours of audio-visual footage, text as well as observational recordings, transcribed as well as untranscribed. The corpus of transcribed texts has been archived at Zenodo (Döhler 2020). The latter contains all transcription files in ELAN format (.eaf) in a single zip file. The associated audio and video files are accessible in separate session nodes at both locations. The title of a session node follows the formatting of the source code as described above.

4 Grammatical background

Komnzo is a double-marking language, in which the verb indexes core arguments and noun phrases are flagged for case. The case marking is organised in an ergative-absolutive system. In addition to four core cases (absolutive, ergative, dative, possessive), there are 13 semantic cases. The system of argument indexation in verbs is of the split-S type: The single argument of an intransitive verb is indexed in the same slot as the A argument of a transitive verb, if the event is dynamic. However, it is indexed in the same slot as the P argument, if the event is stative.

I describe the principle of distributed exponence in §4.1, which is important for the understanding of verb morphology as well as for the glossing conventions adopted in this article. In §4.2, follows a description of verb templates. In §4.3, I present the pronominals in Komnzo: indexes (§4.3.1) and free pronouns (§4.3.2).

In §4.4, I introduce two nominal enclitics that play a role in the expression of reflexive situations.

4.1 Distributed exponence

As other languages of the Yam family, Komnzo has complex verb morphology. Verbs express person, number and gender of up to two participants, 18 TAM categories, valency, directionality and deictic status. Complexity lies not only in the amount of grammatical categories that can be expressed morphologically, but also in the way how these categories are encoded. This is best described by the term “distributed exponence”, which has surfaced in the recent literature on multiple exponence (Caballero & Harris 2012). Carroll gives a precise definition of distributed exponence in his description of Ngkolmpu as “the phenomenon in which morphosyntactic and morphosemantic properties are marked non-redundantly at multiple inflectional sites” (2016: 268).

In Komnzo verb morphology, this plays out as underspecification of individual morphs. Consider Table 2 below, in which the verb *thoraksi* (*thor-*-|*thorak-*) ‘appear’ is inflected for different TAM categories.¹

Table 2: *Thoraksi* ‘appear’ in a 3SG.M frame

TAM category	Inflected form
non-past	<i>y-thorak-wr</i>
recent-past imperfective	<i>su-thorak-wr</i>
recent-past durative	<i>y-thorak-wr-m</i>
recent-past perfective	<i>sa-thor</i>
past imperfective	<i>y-thorak-wr-a</i>
past durative	<i>su-thorak-wr-m</i>
past perfective	<i>sa-thor-a</i>
iterative	<i>su-thor</i>

It becomes clear from the table that the inflectional sites (the prefix, the verb stem, and the suffixes) contribute some information to TAM without encoding a particular TAM value. For example, the prefix *y-* occurs in the non-past, the

¹Komnzo verb lexemes have two stems, which are sensitive to aspect. The formal relationship between the two stems ranges from suffixation to consonant mutation to full suppletion. In this chapter, I will list the two stems in brackets after the infinitive in this way: *thoraksi* (*thor-*-|*thorak-*).

recent-past and the past tense, both in imperfective and durative aspect. Likewise, the verb stem *thor* is involved in expressing perfective aspect, but also the iterative. In other words, the morphs in each inflectional site are underspecified as to their grammatical meaning, in this case the TAM category. Underspecification of this type is also found in other grammatical categories, such as number and valency.

Distributed exponence prompts us to take the inflected verb, not the morpheme, as the level of analysis. As a practical consequence, I gloss verbs in a word-in-paradigm style (Matthews 1974), as shown in (1–2). In the morpheme tier, slashes separate the verb stem from the inflectional material. In the gloss tier, the inflected verb form is placed in its paradigm by listing information in the following order: argument structure, TAM, directionality, and (following a forward slash) lexeme translation. Additionally, I put the entire verb gloss in square brackets followed by an abbreviation of the respective verb template in subscript. The verb in (1) occurs in the prefixing template (PREF), while the verb in (2) occurs in the ambifixing transitive template (TRANS). The role of verb templates will be addressed in the next section.

- (1) *kabe y\thorak/wr*
man [3SG.M:NPST:IPFV/appear]_{PREF}
'The man appears.'
- (2) *kabe=f nge wn\zä/nzr*
man=ERG.SG child [2|3SG.F:NPST:IPFV:VENT/carry]_{TRANS}
'The man carries the girl.'

4.2 Verb templates

Inflected verbs in Komnzo can be classified into prefixing, middle, and ambifixing, depending on whether a prefix, a suffix or both are employed for indexing core arguments. I use the term "verb template" for this arrangement of morphological slots. Hence, we can say that a particular lexeme "occurs in a prefixing template" or that it "occurs in an ambifixing template". Templates are lexically determined for some verbs, which means that we can speak of a "prefixing verb" or of a "middle verb". However, for the majority of verbs, the system of templates is somewhat flexible, that is a verb stem can occur in different templates. Thus, we can describe a particular lexeme by stating that "it occurs in the middle template and the ambifixing template, but not in the prefixing template". Note that the distinction between prefixing, middle and ambifixing is based on a purely struc-

tural perspective for now. As we will see below, labels such as “intransitive” and “transitive” are a matter of token frequency of individual lexemes in Komnzo.

The morphological slots involved in the definition of templates are the following: (i) the undergoer prefix, (ii) the diathetic prefix, and (iii) the actor suffix. The undergoer prefix indexes a core argument, in which case it shows agreement in person, number and gender (§4.3.1). The undergoer slot can also be filled with the middle prefix, which is invariant for these categories. The diathetic slot can be empty or be filled by the diathetic prefix *a-*. The neutral label “diathetic” captures the fact that for some verbs its function is to increase valency, whereas for other verbs it decreases valency. Finally, the actor suffix indexes a core argument in the middle and ambifixing templates, in which case it shows agreement in person and number. In the prefixing template, the actor slot is absent. Table 3 provides a schematic overview of the possible templates. The column for the undergoer slot lists the morph *y-* for 3SG.M, with the exception of the middle template, where the morph is *η-*. The column for the actor slot lists the morph *-th* for 2|3NSG.

Table 3: Verb templates

template	UND	DIA	verb stem	ACT
prefixing	✓(y-)	-	✓	-
prefixing (indirect object)	✓(y-)	✓(a-)	✓	-
middle	✓(η-)	✓(a-)	✓	✓(-th)
ambifixing	✓(y-)	-	✓	✓(-th)
ambifixing (indirect object)	✓(y-)	✓(a-)	✓	✓(-th)

Table 3 shows that there are more than the three templates mentioned above. This is caused by the absence versus presence of the diathetic prefix. Thus, the prefixing and the ambifixing template can be subdivided further. The prefixing template without the diathetic prefix indexes an S or P argument in the undergoer slot. It is simply labelled “prefixing template” (PREF in the gloss). The prefixing template with the diathetic prefix indexes a beneficiary or possessor argument. It is labelled “indirect object prefixing template” (IO.PREF in the gloss). Likewise the ambifixing template can occur without or with the diathetic prefix. Without the diathetic prefix, the undergoer prefix indexes a P argument. With the diathetic prefix, it indexes a beneficiary or possessor. I label these two templates as “transitive ambifixing template” and “ditransitive ambifixing template” (TRANS and DITRANS in the gloss). For reasons of better readability, I henceforth drop “ambifixing” from the labels and instead simply use “middle”, “transitive”

and “ditransitive template”. Note that these labels depart from a purely structural perspective and reflect the function of these templates. I provide more concrete examples in (3a–3e).

The system of verb templates is lexically determined for some verbs, while it is fluid for most verbs. This fluidity is one of the central aspects in understanding Komnzo verb morphology. That being said, there are only a handful of lexemes, which can enter into all five templates. Below, I present the verb *migsi* (*mig-*|*mir-*) ‘hang’ in all five templates to show how template choice impacts on argument structure and, more generally, on the meaning of the verb. The elicited examples in (3) appear here in a reduced gloss, which ignores all TAM information and stem variations.² Note that the examples (3a–3e) correspond to the five templates, as they are listed in Table 3.

- (3) a. *y-mithgr*
[3SG.M-hang]_{PREF}
'He hangs.'
- b. *y-a-mithgr*
[3SG.M-DIA-hang]_{IO,PREF}
'Something of his (or for him) hangs.'
- c. *ŋ-a-mig-wr*
[MID-DIA-hang-2|3SG]_{MID}
'It hangs itself up.'
- d. *y-mig-wr*
[SG.M-hang-2|3SG]_{TRANS}
'S/He hangs him up.'
- e. *y-a-mig-wr*
[3SG.M-DIA-hang-2|3SG]_{DITRANS}
'S/He hangs up something of his (or for him).'

The prefixing template (3a–3b) is used for intransitive event types that are stative, while the middle template (3c) is used for intransitive event types that

²The few lexemes which can enter into all five templates use a variant stem only in the prefixing template. The stem of *migsi* for the prefixing template is *mi*, while it is *mig* or *mith* for the middle and the ambifixing template depending on aspect. The *thgr* element in (3a–3b) is a stative non-dual suffix that has not been segmented here. Likewise (3c–3e) also appear in a simplified gloss. The *-wr* suffix is in fact marking aspect and non-dual number, while the SG is expressed as a zero. For further information on verb morphology, I refer the reader to the Komnzo grammar (Döhler 2018).

are dynamic. Note that the diathetic prefix is part of the middle template. Thus, Komnzo has a split-S system that is based on event dynamicity. In terms of number of lexemes, the middle template is the preferred template for intransitive verbs. The coreference situation in (3c) is only caused by the semantics of the verb *migsi* ‘hang’ and an alternative, though admittedly long-winded translation of (3c) would be ‘it assumes a hanging position’. As I argue in this chapter, the middle template is coexpressive for a range of functions, which would be termed intransitive, impersonal, reflexive, reciprocal and passive in languages that have dedicated constructions for these. However, there is no constructional distinction between these in Komnzo. Example (3d) shows the transitive template, which is the “major biactant construction” (Lazard 2002). Finally, example (3e) shows the ditransitive template, which differs from the transitive template in that the diathetic prefix has been added to the verb. This is the way to express ditransitives in Komnzo, and one can argue that all ditransitives are derived in the language (Döhler 2018: 206).

For the majority of verb lexemes in Komnzo, labels such as “transitive verb” or “intransitive verb” are a matter of frequency of template choice. I will give three examples to illustrate that claim by showing template frequencies in the text corpus. I start with *msaksi* (*msak|ms*) ‘sit, dwell, stay’, which occurs 331 times in the corpus. 296 tokens are in the prefixing template with the meaning ‘sit, dwell, stay’, as in (4). 30 tokens occur in the middle template with the meaning ‘sit (self) down, assume a sitting position’, as in (5). Finally, 5 tokens occur in the transitive template with the meaning ‘sit someone down’, as in (6). Note that (6) lacks noun phrases expressing the agent and patient. If these were expressed, they would appear in ergative and absolute case, respectively. The skewing of the distribution allows us to characterise *msaksi* as a stative, intransitive, prefixing verb (4). It follows that the occurrence of this verb in the middle template in (5) should be analysed as an alternation that has to do with dynamicity. Likewise the occurrence in the transitive template in (6) should be analysed as a causative alternation.

- (4) *nafa-ŋare komnzo wä|m/nza masu=n*
 3.POSS-wife(ABS) just [3SG.F:PST:IPFV/sit]_{PREF} Masu=LOC
 ‘His wife just stayed in Masu.’ [tci20110810-2 MAB 8]
- (5) *āusi fāth z-zrzü=me ḷa\msak/wa*
 old.woman DIM(ABS) REDUP-knee=INS [SG:PST:IPFV/sit]_{MID}
 ‘The old woman sat down on her knees.’ [tci20120925-01 MKA 400]

- (6) *wati y\msak/wrth fof*
 then [2|3PL>3SG.M:NPST:IPFV/sit]_{TRANS} EMPH
 ‘Then they really sit him down.’ [tci20120909-06 KAB 91]

A second example is the verb *brigsi* (*brig*-|*brim*-) ‘return’, which occurs 181 times in the corpus. Note that the prefixing template is not available for this lexeme. 137 tokens occur in the middle template with the meaning ‘return, go back’, as in (7a). Only 44 of the tokens occur in the transitive template with the meaning ‘bring something or someone back’, as in (7b). In (7), the speaker describes the slash-and-burn agriculture, whereby gardens are shifted to a new location each year. Thus, *brigsi* is a dynamic, intransitive, middle verb. The occurrence in the transitive template in (7b) should be analysed as a causative alternation.

- (7) a. *fthmäsi za\bth/e bää we*
 meanwhile [1PL>3SG.F:RPST:PFV/finish]_{TRANS} MED also
kwan\brig/wre we z=n\rä/
 [1PL:RPST:IPFV:VENT/return]_{MID} also PROX=[1PL:NPST:IPFV/be]_{PREF}
zena
 now
 ‘Meanwhile we have finished (the soil) there and we returned now...’
- b. *zane ysakwr=en zf za\thkäf/e*
 DEM.PROX season=LOC IMM [1PL>3SG.F:RPST:PFV/start]_{TRANS}
z=\rä/ ñarake
 PROX=[3SG.F:NPST:IPFV/be]_{PREF} garden
thun\brig/wre zena
 [1PL>2|3PL:RPST:IPFV:VENT/return]_{TRANS} now
 ...this year we have started (making gardens) right here. We brought
 back the gardens now.’ [tci20120922-08 DAK 80-81]

The third example is the verb *zrin* (zä-|*thor*-) ‘carry’, which occurs 109 times in the corpus. Again, the prefixing template is not available for this lexeme. Only 3 tokens occurs in the middle template, as in (8), while the remaining 106 are in the transitive template, as in (9). Example (8) comes from a procedural text about yam cultivation, while (9) is from a text about sorcery. It follows that we have to analyse *zrin* as a transitive verb with the meaning ‘carry something’. Its occurrence in the middle template in (8) is a passive alternation.

- (8) *ane thara=karä=sü kra\zä/nzrth bobo*
 DEM bundle=PROP=ETC [2|3PL:IRR:IPFV/carry]_{MID} MED:ALL
 ‘They (yams) will be carried there with the bundle and all.’ [tci20121001
 ABB 27]
- (9) *bäne zra\zä/nzr (...) fenz*
 RECOG(ABS) [2|3SG>3SG.F:IRR:IPFV/carry]_{TRANS} (...) pus(ABS)
kzi=kaf
 bark.tray=PROP
 ‘He will carry the watchamacallit...the pus in the barktray.’
 [tci20130903-04 RNA 49-51]

For some verb stems, the occurrence in different templates may alter the meaning to such a degree that these are best analysed as separate lexemes. One such example is *rbänzsi* (*rbänz*-|*rbs*-), which has the meaning ‘untie’ in the transitive template, but ‘explain’ in the ditransitive template (lit. ‘untie for someone’). A second example is *karksi* (*kark*-|*kar*-), which has the meaning ‘pull’ or ‘smoke’ in the middle template, but ‘take away from someone’ in the transitive template.

As a summary to this section, I want to highlight two points. First, verb templates and the possibility for verb stems to occur in more than one verb template is central to the analysis of Komnzo verb morphology. Labels such as “intransitive verb” or “transitive verb” only make sense if one looks at the frequency of template choice in natural speech. Komnzo is thus a good example of what Lazard describes as “scalar transitivity” (2002: 166).

Secondly, the middle template is a construction that is coexpressive for a number of semantic situation types. We can describe these types in the following way: single actor with coreference (reflexive), single actor without coreference (intransitive), dummy-actor or empty-actor (impersonal), mutual action (reciprocal), patient topicalization (passive), patient backgrounding (antipassive). Henceforth, I will use the labels in brackets to refer to the semantic situation types. In the main part of this chapter in §5, I give examples of these situation types to argue against a dedicated reflexive construction in Komnzo.

4.3 Pronominals

4.3.1 Indexes

For the purpose of describing argument indexation in verbs in more detail, it is useful to take a look at the prefixes. As we have seen in §4.1, distributed exponence means that the prefixes are underspecified with respect to TAM. For

this reason, I have labelled the three series with Greek letters as α , β and γ in Table 4. Each series has distinct forms for person (1, 2, 3), number (singular vs. non-singular) and gender in third person singular (feminine vs. masculine). The prefixes are underspecified for number, hence the label NSG for non-singular. As in many Yam languages, Komnzo verbs have a dedicated verbal slot that marks duality (dual vs. non-dual) (Döhler 2018: 216). The three-value number system (singular, dual, plural) is constructed by combining two binary oppositions: singular vs. non-singular and dual vs. non-dual.

Table 4: Person prefixes

Gloss	α	β	γ
1SG	<i>wō-</i>	<i>kw-</i>	<i>zu-</i>
1NSG	<i>n-</i>	<i>nz-</i>	<i>nzn-</i>
2SG	<i>n-</i>	<i>nz-</i>	<i>nzn-</i>
3SG.F	<i>w-</i>	<i>z-</i>	<i>z-</i>
3SG.M	<i>y-</i>	<i>s-</i>	<i>s-</i>
2 3NSG	<i>e-</i>	<i>th-</i>	<i>th-</i>
MID	<i>ŋ-</i>	<i>k-</i>	<i>z-</i>

As we can see in Table 4, there are a number of syncretisms in the system. Most of them are disambiguated by other elements in the verb morphology. For example, the syncretism between the β and γ series in 3SG and 2|3NSG is disambiguated by the fact that these prefix series combine with different verb stems. Most Komnzo verbs have two verb stems that are sensitive to aspect. What is important for this chapter is the fact that each prefix series has a morph that is invariant for number and person, which is shown in the last row of Table 4. This is the middle marker (MID) used for the middle template as described in §4.2. We can see the middle marker as the first element in the verbs of some of the above examples, even though the morphs have not been segmented these examples: *ŋ-* (5), *k-* (7a, 8) and *z-* (9).

4.3.2 Free pronouns

Komnzo has a rich set of free pronouns, as we can see in Table 5. Free pronouns encode the four core cases: absolute, ergative, dative and possessive. Core cases flag those arguments that can be indexed in the verb. Furthermore, free pronouns express a number of obliques with a range of semantic cases, which cannot be

indexed in the verb. Unlike other Yam languages, for example Nen (Evans 2015b) and Ngkolmpu (Carroll 2016), there are no reflexive or reciprocal pronouns in Komnzo.

Table 5: Free pronouns

case	1SG	1NSG	2SG	2NSG	3SG	3NSG
ABS	<i>nzä</i>	<i>ni</i>	<i>bä</i>	<i>bä</i>	<i>fi</i>	<i>fi</i>
ERG	<i>nze</i>	<i>ni</i>	<i>be</i>	<i>bné</i>	<i>naf</i>	<i>nafa</i>
DAT	<i>nzun</i>	<i>nzenm</i>	<i>bun</i>	<i>benm</i>	<i>nafan</i>	<i>nafanm</i>
POSS	<i>nzone</i>	<i>nzenme</i>	<i>bone</i>	<i>benme</i>	<i>nafane</i>	<i>nafanme</i>
CHAR	<i>nzonema</i>	<i>nzenmema</i>	<i>bonema</i>	<i>benmema</i>	<i>nafanema</i>	<i>nafanmema</i>
ASSOC	<i>ninrr</i>	<i>ninä</i>	<i>bnrr</i>	<i>bnä</i>	<i>nafr</i>	<i>nafä</i>
LOC	<i>nzudben</i>	<i>nzedben</i>	<i>budben</i>	<i>bedben</i>	<i>nafadben</i>	<i>nafanmedben</i>
ALL	<i>nzudbo</i>	<i>nzedbo</i>	<i>budbo</i>	<i>bedbo</i>	<i>nafadbo</i>	<i>nafanmedbo</i>
ABL	<i>nzudba</i>	<i>nzedba</i>	<i>budba</i>	<i>bedba</i>	<i>nafadba</i>	<i>nafanmedba</i>
PURP	<i>nzunar</i>	<i>nzenar</i>	<i>bunar</i>	<i>benar</i>	<i>nafanar</i>	<i>nafanar</i>

4.4 Further nominal morphology

There are two nominal enclitics in Komnzo which play a role in the expression of reflexive situations. The two clitics are the exclusive clitic =*nzo* (ONLY), which marks contrastive focus, and the emphatic clitic =*wä* (EMPH), which marks emphasis. The former is related to the adverb *komnzo* ‘only, still, just’, on which the name of the language is based.³ As can be seen in (10) and (11), neither of the two enclitics is a reflexive marker. There is no coreference in the two examples. In (10), =*nzo* attaches to the S argument of the copula. In (11), =*wä* attaches to the A argument. In §5, I will show examples in which these enclitics facilitate coreference. What is important here is the fact that they do not encode coreference, i.e. they are non-reflexive markers.

³There is no information as to the origin of the name Komnzo. However, it seems reasonable to assume that it originated in a misunderstanding on the part of a colonial officer. He must have mistaken *komnzo* as a proper name in the phrase *komnzo zokwasi*, which means ‘just language’ or ‘only words’, when he enquired about the language or tribe name. Note that a number of Yam language names of the Tonda branch are based on words that mean ‘only, still, just’, e.g. Kánchá, Kémä, Wára, Wérè and Anta.

- (10) *ni=nzo miyatha n\rä/ra wämne dunzi=ma fof*
1NSG=ONLY knowledge [1PL:PST:IPFV/be]_{PREF} tree arrow=CHAR EMPH
'Only we knew about the arrow in the tree.' [tci20120814 ABB 106]
- (11) *ni=wä komnzo ñarake b=ä\fiyok/wre*
1NSG=EMPH still garden(ABS) MED=[1PL>2|3PL:NPST:IPFV/make]_{TRANS}
'We are still making gardens there.' [tci20120922-08 DAK 75]

For other Yam languages, a dedicated set of reflexive/reciprocal pronouns (R/R) has been described. In Ngkolmpu, these are built from the ergative pronouns by adding a /*to*/ element, for example: *ngkai* [1SG.ERG] vs. *ngkaito* [1SG.R/R] or *piengku* [3SG.ERG] vs. *piengkuto* [3SG.R/R] (Carroll 2016: 138). The same is true in Nen, for which Evans describes a set of reflexive/reciprocal pronouns featuring a word-final /*nzo*/ element, for example *bm* [2SG] vs. *benzo* [2SG.R/R] and *bbenzos* [2NSG.R/R] (Evans 2015b: 1091).

The /*to*/ element in Ngkolmpu and the /*nzo*/ element in Nen are certainly cognate with the exclusive enclitic =*nzo* in Komnzo. However, it has not grammaticalised into a set of reflexive/reciprocal pronouns. On the contrary, it may combine with any nominal, as we can see in (12), where it attaches to a proper name.

- (12) *bres=f=nzo kwrfar wämne zan=me*
Bres=ERG.SG=ONLY big.wallaby(ABS) tree beating=INS
di sa\fierz/a
back.of.head(ABS) [SG>3SG.M:PST:PFV/belt]_{TRANS}
'Only Bres struck down the big wallaby by beating it with a stick.'
[tci20130927-06 MAB 6]

5 Reflexive situations

This section describes the expression of reflexive situations in Komnzo. I discuss coreference between agent and patient in §5.1, which is followed by a description of coreference between agent or patient and other semantic roles in §5.2. Lastly, I discuss coreference across clauses in §5.3. In each section, I show that the relevant construction or relevant marker is coexpressive, i.e. it is not solely used for reflexive situations.

5.1 Coreference between agent and patient

As it has become clear from §4.2, the middle template is the strategy to express coreference between agent and patient. Recall that the middle template expresses

reflexive situations in addition to a number of other situation types, such as intransitive, reciprocal, impersonal, passive, and antipassive. In this section, I discuss these situation types and show evidence from the Komnzo text corpus.

In (13), we see the verb *traksi* (*trak|tr*) ‘fall’ used in the middle template. This verb can occur in the transitive template, with the somewhat unexpected meaning ‘catch fish’.⁴ Hence, the stem of *traksi* has to be analysed as two different lexemes depending on template choice. There are 14 tokens of *traksi* ‘fall’ in the corpus and 13 of these occur in the middle template. There is one token in the ditransitive template to which I will return in §5.2. The important point here is that the middle template is used to express an intransitive situation. In fact, this is the main function of this template. It is striking that the middle template is much more frequent than the prefixing template when comparing individual verb lexemes. The following list of intransitive verbs occur almost exclusively in the middle template: *yak* (*kwi|math*) ‘run’, *mnzeraksi* (*mnzerak|mnzer*) ‘fall asleep’, *rminzsi* (*rminz|rnith*) ‘smile’, *borsi* (*bor|both*) ‘laugh’, *farksi* (*fark|far*) ‘set off’, *sogsi* (*sog|söbäth*) ‘ascend’, *rsörsi* (*rsör|rsöfäth*) ‘descend’, *bznsi* (*bzn*) ‘work’, *rüsi* (*rü|rüth*) ‘rain’, (*rä|r*) ‘think’.

- (13) *kwa ña\trاك/wr zane nge*
 FUT [2|3SG:NPST:IPFV/fall]_{MID} DEM.PROX child(ABS)
z=|rä/
 [PROX=SG.F:NPST:IPFV/be]_{PREF}
 ‘It will fall down, this baby girl here.’ [tci2011004 TSA 110]

In (14), we see an example of coreference between agent and patient with the verb *ttüsi* (*ttü|ttüth*) ‘write, paint’ used in the middle template. This lexeme occurs only 7 times in the corpus and (14) is the only example in the middle template. The remaining tokens are in the transitive template. Hence, the use of the middle template is a reflexive alternation of an otherwise transitive verb.

- (14) *zä kwa ña\ttü/nzé.*
 PROX FUT [1SG:NPST:IPFV/paint]_{MID}
 ‘I will paint myself here.’ [tci20130907-02 JAA 110-111]

Example (15) shows another example of coreference between agent and patient. The verb *marasi* (*mar*) ‘see’ is used in the middle template to express ‘look

⁴By analogy to the lexemes discussed in §4.2 one would expect that a lexeme which means ‘fall’ in the middle template, would mean ‘drop’ in the transitive template. Instead, the meaning of ‘drop’ is expressed by a different lexeme.

after yourself'. This example comes from a public speech, in which the speaker admonishes the audience about the excessive consumption of alcohol during an upcoming dance. For stylistic reasons, he uses the singular instead of the plural.

- (15) *ka\mar/anzé!* *bänema wri=f* *kwa*
 [2SG:IMP:IPFV/see]_{MID} because drunkenness=ERG.SG FUT
n|zä/nzr *we bun* *we ane fäsi* *kwa*
 [2|3SG>2SG:NPST:IPFV/carry]_{TRANS} also 2SG.DAT also DEM shame FUT
\rä/
 [3SG.F:NPST:IPFV/be]_{PREF}
 'Look after yourself! Because when you get totally drunk, it will be embarrassing for you.' [tci20121019-04 ABB 16-17]

The verb *marasi* occurs 229 times in the corpus. 211 tokens are in the transitive template, 9 in the ditransitive template and 9 in the middle template. Of the 9 tokens in the middle template, only one example expresses a reflexive situation (15). 4 tokens express an antipassive situation, i.e. the patient argument is not indexed in the verb. I show an example of this in (21) below. The remaining 4 tokens express a reciprocal situation, as in (16).

- (16) *fi nm miyo-sé ηa\mar/nath*
 3.ABS perhaps desire-ADJZ [2|3DU:NPST:IPFV/see]_{MID}
 'Maybe they are in love?' (lit. 'look at each other desiringly?')
 [tci20120925-01 MKA 39-40]

Example (17) shows another example of a reciprocal situation. The verb *zan* (*fn|kwr*) 'hit, kill' occurs 172 times in the corpus: 165 in the transitive template versus 7 in the middle template, which are all reciprocal alternations. Note that the only constructional difference between reflexive and reciprocal situations is that the latter cannot be singular.

- (17) *zá zf ηa|fn/ath.*
 PROX IMM [2|3DU:PST:IPFV/hit]_{MID}
 'They fought each other right here.' [tci20110802 ABB 23]

The middle template in Komnzo is used in contexts that would employ reflexive constructions or reflexive pronouns in other languages, for example body part or whole body actions. Example (18) shows an example with *maiksi*

(*mayuk|mayuf*) ‘wash’. This verb is basically transitive (‘wash someone or something’), but it can appear in the middle template to express reflexive or reciprocal situations. Example (18) comes from a story about the brolga and the cassowary, who went washing together. As mentioned above, it is from context alone that we can infer that the two were washing themselves, rather than each other. Other lexemes in the same semantic domain are *trisi* (*tri|trinz*) ‘scratch’, *royaksi* (*royak|royaf*) ‘dress, decorate’ and *rfrsi* (*rfr|rfrth*) ‘shave, trim’.

Note that the first clause in (18) shows a raising construction. Therefore, the phasal verb *thkäfaksi* (*thkär|thkäf*) ‘start’ occurs in the middle template, while the lexical verb *maikasi* has been nominalised. Only in the second clause, *maikasi* is fully inflected.

- (18) *watik kra\thkäf/th maik-si kwa\mayuk/nmth*
 then [2|3DU:IRR:PFV/start]_{MID} wash-NMLZ [2|3DU:PST:DUR/wash]_{MID}
kwras a yem
 brolga(ABS) and cassowary(ABS)
 ‘Then they started to wash. The broglga and the cassowary were washing.’
 [tci20130923-01 ALB 9-12]

Example (19) shows the middle template used for expressing an impersonal situation, i.e. the argument indexed in the verb is semantically empty. The closest translation of (19) is with a dummy-pronoun (‘it’). Note that the verb in (19) is the light verb (*ko|kor*) ‘become’, which lacks an infinitive.

- (19) *aki zbo krä\kor/.*
 moon(ABS) PROX:ALL [SG:IRR:PFV/become]_{MID}
 ‘It became moon(light) here.’ [tci20120904-02 MAB 47]

Example (20) shows the use of the middle template to express a passive situation. In the example, the speaker explains the content and arrangement of his yam storage house. It is clear from the context that the argument indexed in the verb and expressed by the indefinite pronoun is the patient of the clause.

- (20) *fsan=ma nä kwa ḷan\zä/nzrth*
 Fsan=CHAR INDF.ABS FUT [2|3PL:NPST:IPFV:VENT/carry]_{MID}
zbo=wä zf
 PROX:ALL=EMPH IMM
 ‘From Fsan, some more (yams) will be carried right here.’ [tci20121001
 ABB 45]

Examples (21–22) show an antipassive situation, in which the patient argument is not indexed in the verb. Instead, the verb occurs in the middle template. Here, we can speak of a dedicated antipassive construction because the case frame is different from all other situation types described above: the actor argument is flagged for ergative case. Note that the patient arguments are not indexed in the verb for semantic or pragmatic reasons, i.e. they often rank low in the animacy hierarchy or they are established in the preceding context. In (21) and (22), the respective patient arguments are given in brackets in the English translation. In both examples in the corpus, they are established in the preceding context.

- (21) *maureen=f zä zf ḷa\rg/wrm efoth.*
Maureen=ERG.SG PROX IMM [SG:RPST:DUR/wear]_{MID} day
'Maureen was wearing (the shoes) right here during the day.'
[tci20130901-04 MBK 15]
- (22) *watik we masu kar=é kwe\karis/th*
then also Masu village=ERG.NSG [2|3PL:ITER/hear]_{MID}
'Then, the villagers from Masu also heard (the message).' [tci20131013-01
ABB 363]

The set of examples in this section provides evidence that the middle prefix and the middle template are non-reflexive markers that happen to be coexpressive for reflexive, but also for a range of other situations. The only commonality between these situations lies in the fact that the event is about only one argument, which is one of the main criteria for "middle situations" according to Kemmer (1993). The role of the argument can be disambiguated only in the antipassive construction by the flagging of NPs with the ergative. For the other situation types, it is context alone that determines the correct state of affairs.

5.2 Coreference involving other semantic roles

This section describes how coreference is expressed with other semantic roles, such as possessor, beneficiary, source, location and purpose. As will become clear, the markers and constructions that are employed are non-reflexives, i.e. they are coexpressive for other functions.

In Komnzo, possession is expressed by various constructions: (i) possessive pronouns and possessive case, (ii) possessive prefixes, (iii) the template of the verb. Example (23) shows the use of a possessive pronoun. Note that the empathic clitic =wā attaches to the pronoun, which speakers often translate to English

with ‘X’s own’. Here, the speaker explains the different piles of yam tubers in his storage house and points out which yams are his. Note that in the last clause of (23) there is no emphatic clitic on the possessive pronoun. Thus, a more suitable translation is ‘my’ or ‘mine’ instead of ‘my own’.

- (23) *nzone=wä zane zf e|rä/ (...) zane*
 1SG.POSS=EMPH DEM.PROX IMM [2|3PL:NPST:IPFV/be]_{PREF} (...) DEM.PROX
z=e|rä/ (...) nzone zane zf
 PROX=[2|3PL:NPST:IPFV/be]_{PREF} (...) 1SG.POSS DEM.PROX IMM
e|rä/
 [2|3PL:NPST:IPFV/be]_{PREF}

‘These (yams) here are my own. These ones are here... these are mine here.’ [tci20121001 ABB 129]

Example (24) shows the use of possessive prefixes.⁵ The example concludes an episode in a story with a quote by one of the protagonists. The possessive marker in this example is a prefix on the word *zfth* ‘reason, cause’ and not a possessive pronoun, as in (23). Note that the emphatic clitic =wä attaches to *zfth*. In this verbless clause we find coreference between ‘she’ and ‘her’ as the literal translation shows.

- (24) *watik “fi nafa-zfth=en=wä”*
 then 3.ABS 3.POSS-cause=LOC=EMPH
 ‘Well (he said) “It was only her fault.” (lit. ‘she in her own cause’)
 [tci20120901-01 MAK 207]

Another example of coreference is given in (25), which comes from the description of a picture card showing a man sitting in a prison cell.⁶ The speaker uses direct speech to enact the character. The basic clause is expressed by the absolute pronoun *nzä* and the verb *wothkgr* ‘I am inside’. The first singular argument is coreferential with *nzonemäwä* ‘because of me’, which is a possessive pronoun inflected with the characteristic case and the emphatic clitic.⁷

⁵The semantic difference between possessive case (pronouns, case enclitics) and the possessive prefixes is not based on alienability, but rather on a more general notion of closeness (Döhler 2018: 145).

⁶This is card #16 of the Social Cognition Picture Task (Carroll et al. 2009).

⁷The characteristic case encodes the semantic roles of source ‘from’, reason ‘because of’ or purpose ‘for’ (Döhler 2018: 157). Note that the characteristic case always attaches to a nominal inflected for possessive case, if the referent is animate.

- (25) “nzä nzone=ma=wä zft^h=en zbo
 1SG.ABS 1SG.POSS=CHAR=EMPH cause=LOC PROX:ALL
 wo\thkgr/”
 [1SG.NPST:STAT/be.inside]_{PREF}
 “It’s my own fault that I am in here.” (lit. “Because of me, (my) fault, I am in here.”) [tci20120925-01 KAB 23]

There are several layers of coreference in (26). Recall that there are two verb templates in which the diathetic prefix increases valency (cf. §4.2: 3b and 3d). Both templates can be seen in (21). The example comes from the description of a picture card that shows a policeman, who hands over clothing to a man.⁸ In the first clause, we see that coreference is established between the beneficiary indexed by the verb prefix *ya-* and the possessor expressed by the possessive pronoun *nafane*. There is no free pronoun in the clause to express the beneficiary. Note that the demonstrative *ane* refers to the beneficiary, but *ane* does not inflect for any of the core cases. The second clause contains the direct speech of the policeman. The coreferential elements are all in second singular: there is the topic expression (‘as you are inside’), followed by a speech formula that often accompanies transactions (‘it is for you’ or ‘it is yours’). In the last clause, the possessive pronoun (2SG) is indexed in the copula. However, as (27) shows, the copula *narä* can also index a beneficiary. This is caused by underspecification of the diathetic prefix, which results in an analytic problem, as we will see below.

- (26) *frisman=f nafane slippers gwonyame ane bana*
 policeman=ERG.SG 3SG.POSS slippers(ABS) clothing(ABS) DEM pityful
fof ya\ri/thr “okay bä mane=me
 EMPH [2|3SG>SG.M:BEN:NPST:IPFV/give]_{DITRANS} okay 2SG which=INS
zä gu\thkgr/ bone
 PROX [2SG:NPST:STAT/be.inside]_{PREF} 2SG.POSS
b=na\rä/”
 MED=[2SG.POSS:NPST:IPFV/be]_{IO.PREF}
 “The policeman gives poor him his slippers and clothes (and says) “Now that you are inside, those are your (things).” [tci20111004 RMA 435-436]
- (27) *wati sa\kor/a “bun bana ruga fof*
 then [SG>3SG.M:PST:PFV/speak]_{TRANS} 2SG.DAT pityful pig(ABS) EMPH
na\rä/”
 [3SG.M:BEN:NPST:IPFV/be]_{IO.PREF}
 ‘Well, he said: “The pig is for you poor guy.”’ [tci20120805-01 ABB
 814-815]

⁸This is card #2 of the Social Cognition Picture Task (Carroll et al. 2009)

A similar strategy is used in (28), which comes from a conversational text. The speaker literally says ‘you will finish my wish’. Another possible translation of this clause is ‘you will finish my wish for me’, if we assume that there is an additional argument, a beneficiary, which is not expressed in a separate noun phrase. In other words, there is an analytic problem with the diathetic prefix. When used to increase valency, as in (26) and (28), it is unclear whether the introduced argument is a beneficiary or a possessor. We can only tell from the flagging of the noun phrase, as in (26) and (28). Note that this overlap in the encoding of beneficiary and possessor roles is not uncommon in the Southern New Guinea region. In Ngkolmpu (Carroll 2016) and Bine (own fieldwork), both functions are expressed by the same case marker.

In (26), one can make an argument from frequency and say that the verb *yarisi* (*ri|r*) ‘give’ always has a beneficiary encoded in the prefix, and the corresponding noun phrase is flagged for dative. But examples like (28) are not as clear. The prefix could be indexing a possessor (as shown in the gloss), but also a beneficiary. Only in the latter case two arguments are coreferential and the translation would have to be ‘you will fulfil my wish for me’.

- (28) *nzone miyo kwa wa\bthak/wr*
 1SG.POSS wish(ABS) FUT [2|3SG>1SG:POSS:NPST:IPFV/finish]_{DITRANS}
 ‘You will fulfil my wish.’ (lit. ‘you will finish my wish’) [tci20130823-06
 CAM 23]

As I show in (29), autobenefactives cannot be expressed in this way. Coreference between the two arguments indexed in the verb renders the inflected form ungrammatical, as in (29a). Instead, the middle template has to be used, as in (29b).

- (29) a. * *nzone miyo kwa wa\bthak/é*
 1SG.POSS wish(ABS) FUT [1SG>1SG:POSS:NPST:IPFV/finish]_{DITRANS}
 b. *nzone miyo kwa ya\bthak/é*
 1SG.POSS wish(ABS) FUT [1SG:NPST:IPFV/finish]_{MID}
 ‘I will fulfil my wish.’

Example (30) shows an autobenefactive expressed as an apposition. The speaker explains how they shared the meat after a pig hunt. The verb indexes a first plural actor ('we') and a second/third plural beneficiary ('for them'), which is also expressed by the dative pronoun before the verb. The first plural dative pronoun in the apposition is coreferential with the actor in the verb ('we cut for them (and) for us').

- (30) *sitau=aneme afa kwark b=ya\ra/ nafanm*
 Sitau=POSS.NSG father deceased MED=[3SG:PST:IPFV/be]_{PREF} 3NSG.DAT
ä\kwa/ne (...) nzenm=wä
 [1PL>2|3PL:BEN:NPST:IPFV/cut.meat]_{DITRANS} (...) 1PL.DAT=EMPH
 ‘Sitau’s late father (and them) were there. We cut (meat) for them... and
 for ourselves.’ [tci20120821-02 LNA 96-97]

Source roles are expressed by the characteristic case (CHAR), which – for animates only – attaches to a possessive inflection. In (31), the agent (Yasi) is coreferential with the source (*nafanemawä*) in the apposition. Note that the latter is marked with the emphatic clitic (=wä).

- (31) *yasi=f ane fof fam thn\r/a*
 Yasi=ERG.SG DEM EMPH thought(ABS) [SG>2|3PL:PST:IPFV:VENT/do]_{TRANS}
 (...) *nafane=ma=wä mrn fof*
 (...) 3SG.POSS=CHAR=EMPH family EMPH
 ‘Yasi thought of them, of his own family.’ [tci20111107-01 MAK 176-177]

In (32), the speaker is giving advice to his interlocuter as to the right way of sharing one’s harvest. The agent indexed in the verb (2SG) is coreferential with the source (*bonemawä*). Again the source is inflected with the emphatic enclitic (=wä).

- (32) *keke kwa bone=ma=wä za\na/thé we*
 NEG FUT 2SG.POSS=CHAR=EMPH [2SG>3SG.F:IMP:IPFV/eat]_{TRANS} also
näbun=ane=ma be za\na/thé
 INDF=POSS.SG=CHAR 2SG.ERG [2SG>3SG.F:IMP:IPFV/eat]_{TRANS}
 ‘Don’t eat (the yam) from your own (harvest)! Eat (the yam) from another
 one’s (harvest)!’ [tci20120805-01 ABB 760-761]

The role of location is expressed by one of the local cases: locative, allative and ablative. Coreference is achieved by a possessive construction. In (33), a possessive prefix attaches to a place noun inflected for the locative case. The actor indexed in the verb is coreferential with the possessor of the locative marked role ('at your place'). In (34), the agent of the verb which is also expressed in the noun phrase ('Babua’s wife') is coreferential with the possessor of the allative marked role ('to her own village').⁹

⁹Note that in (33–34), the gloss shows no person value, but only number (sg). This neutralization of the person value occurs in certain TAM inflections (Döhler 2018: 207).

- (33) “*bu-kar=en ane foſ bā safak e\mgthk/wa*”
 2SG.POSS-place=LOC DEM EMPH MED saratoga(ABS)
 [SG>2|3PL:PST:IPFV/feed]_{TRANS}
 ‘You fed these saratoga fish there at your place.’ [tci20110802 ABB
 121-122]
- (34) *babu=ane ḷare zan\math/a nima*
 Babua=POSS.SG wife(ABS) [SG:PST:PFV:VENT/run]_{MID} like.this
nafa-kar=fo=wä safs=fo
 3.POSS-village=ALL=EMPH Safs=ALL
 ‘Babua’s wife ran to her own village, to Safs.’ [tci20120814 ABB 211-213]

5.3 Coreference across clauses

Coreference across clauses or long-stance coreference in Komnzo is always ambiguous and only the context resolves whether there is coreference or not. Hence, the elicited example in (35) can have two interpretations if it occurs out of context.

- (35) *fi ḷa\ko/nzrth nima fi kmam*
 3.ABS [2|3PL:NPST:IPFV/speak]_{MID} like.this 3.ABS APPR
thra\yak/
 [2|3PL:IRR:IPFV/walk]_{PREF}
 ‘They₁ say that they₁ should not go.’
 ‘They₁ say that they₂ should not go.’

Example (36) is a corpus example from a conversational task. It shows coreference between the oblique argument in the matrix clause ('located with you') and the actor argument indexed in the verb in the relative clause (2SG).

- (36) *bun=dbo=nzo \|rä/ mane*
 2SG.DAT=ALL=ONLY [SG.F:NPST:IPFV/be]_{PREF} which(ABS)
za\wok/th
 [2SG>3SG.F:IMP:PFV/choose]_{TRANS}
 ‘It is up to you, which one you choose!’ [tci20111004 RMA 524]

In (37), the agent of the first clause (1SG) is coreferential with the possessor in the second clause ('my eyes'). The possessive construction makes up a verbless clause ('but I saw it'), but it can also be translated as an apposition ('but in my eyes').

- (37) *nzä keke skoro fthé kwof\rä/rm fi*
1SG.ABS NEG school(ABS) when [1SG:PST:DUR/be]_{PREF} but
nzu-sin=en=wä fof
1SG-eye=LOC=EMPH EMPH
'I was not a school (child) at that time, but I witnessed this.' (lit. 'but really
in my eyes') [tci20150906-10 ABB 373-374]

6 Conclusions

As the preceding sections have shown, the grammatical markers and constructions that are used for the expression of reflexive situations are all coexpressive for a range of other functions. The middle template covers situation types that fall under label of "middle", as defined by Kemmer (1993). The exclusive clitic (=*nzo*) and the emphatic clitic (=*wä*) are used for creating contrastive focus and emphasis, respectively. The overlap of intensifiers and reflexives is known from the cross-linguistic literature (König & Siemund 2000). Thus, it would be misleading to speak of a reflexive construction, reflexive pronouns or reflexive markers in Komnzo. Instead, reflexive situations are inferred from constructions like the middle template, emphatic markers and contrastive focus markers that are much broader in their function.

Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ACT	actor suffix	IO.PREF	indirect object prefixing
ADJZ	adjectivizer		template
APPR	apprehensive	INS	instrumental case
ASSOC	associative case	MED	medial (deictic)
CHAR	characteristic case	MID	middle
DIA	diathetic prefix	NEG	negator
DIM	diminutive	NPST	non-past
DIST	distal (deictic)	NSG	non-singular
DITRANS	ditransitive template	ONLY	exclusive marker ('only', 'just')
EMPH	emphatic	PROX	proximal (deictic)
ETC	et cetera	PREF	prefixing template
IMM	immediate ('right here')		

PURP	purposive case	TRANS	transitive template
RECOG	recognitional	UND	undergoer prefix
REDUP	reduplication	VENT	venitive
RPST	recent-past		

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Chapter 17

Reflexive constructions in Nungon

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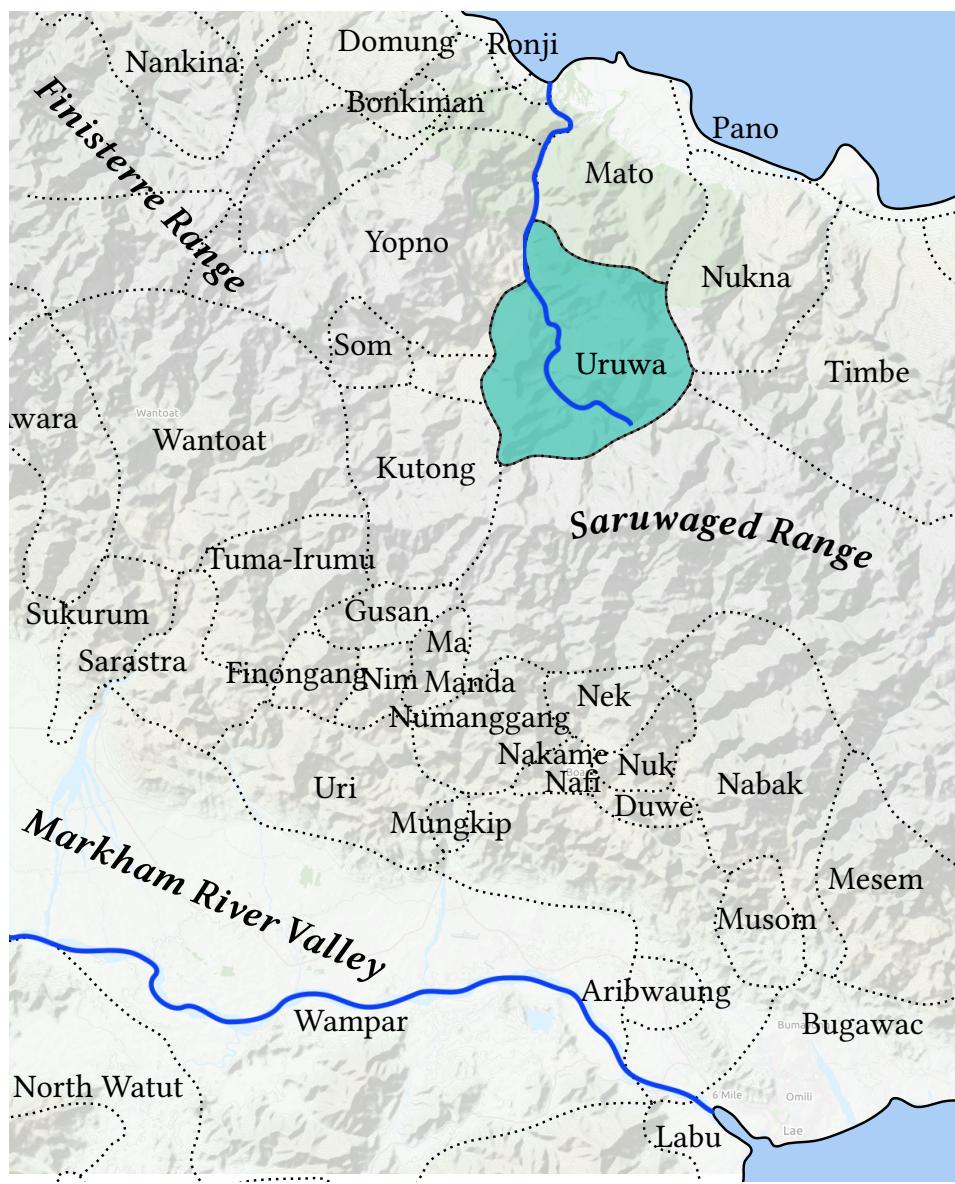
This chapter gives an overview of reflexive constructions in the Papuan language Nungon of Morobe Province, Papua New Guinea. Nungon has two types of free personal pronouns: a “basic” set and an “emphatic” set. The emphatic set includes more formal person/number distinctions than the basic set, and is used for various pragmatic effects relating to contrast and focus, as well as for the reflexive relationship between a transitive subject and object, when they are obligatory. Nungon has no formal marking for reflexive relationships beyond transitive subject/object coreference, however, with interpretation of reflexivity largely context-dependent for subject/oblique coreference and other coreferential combinations.

1 Introduction

This chapter gives an overview of reflexive constructions in the Papuan language Nungon. Nungon has no reflexive pronoun or another marker of reflexivity. Instead, reflexivity is one function of an “emphatic” set of personal pronouns. Discussion of Nungon reflexivity here was inspired and guided by the questionnaire by Janic & Haspelmath (2023 [this volume]).

Nungon is a Papuan language of the Finisterre group within the Finisterre-Huon language family, spoken in northeastern Papua New Guinea. Nungon is an umbrella term applied to the southern four village dialects of an oval-shaped dialect continuum in the Uruwa River valley (see Figure 1), in which each village community historically had a distinct dialect. The northernmost dialects are known collectively as Yau, source of the ISO code `<yuw>` that applies to the entire dialect continuum. Nungon is spoken by approximately 1,000 people, but





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Figure 1: Linguistic context of the Uruwa River valley (shaded), Morobe Province, Papua New Guinea, based on Sarvasy (2017a: 7)

these are divided among the distinct dialects, with no more than about 350 speakers of each dialect. All data and discussion in this chapter are based on the Towet village dialect.

A full overview of Nungon grammar can be found in (Sarvasy 2017a).¹ Some additional phonetic and phonological details are in Sarvasy et al. (2019a,b, 2020). Nungon is an agglutinating language with some fusion. Constituent order is verb-final. Grammatical relations are indicated through indexation on the verb and through postpositions. There is no grammatical gender (Sarvasy 2016b has more on covert gender marking in Nungon). Nungon number marking includes multiple “splits” (Sarvasy 2018), with different areas of the grammar using different number systems.

Like many Papuan languages, Nungon is a clause chaining language (Sarvasy 2015, 2020a), with several non-finite verb inflections which lack tense, mood, and, sometimes, subject person/number information. These typically serve as non-final members of clause chains or multi-verb predicates (Sarvasy 2020b). Finite verb inflections obligatorily mark subject person/number, distinguishing seven forms (second person dual always has an identical form to third person dual, and the same goes for second person plural and third person plural). A sub-class of 15 transitive verbs, most which take prototypically human object arguments, also obligatorily mark object person and/or number through a verbal prefix.

This chapter primarily draws on the author’s monolingual (Nungon-only; see Sarvasy 2016a) immersion fieldwork on Nungon grammatical structures over a total of nine months (between 2011 and 2013), during which a 140,700-word corpus of Nungon natural speech was created.² The corpus contains transcribed audio- and video-recorded texts: mostly narratives, but also including some dialogues, procedural texts, and songs, as well as the author’s transcriptions of unrecorded natural speech from observation and elicitation in the field. Over 40 adult Nungon speakers feature in the recordings. This chapter is also informed by the author’s continued involvement since 2015 with the Towet village community to document child acquisition of the Nungon language (Sarvasy 2019b, 2020a,b). The two much-larger corpora of child-adult conversational interactions

¹Nungon quantification is discussed in full in Sarvasy (2017c); imperatives and commands are covered in Sarvasy (2017b); linguistic history and comparative structures is in Sarvasy (2013, 2014); more anthropological linguistic detail on covert expression of gender and secret language are in Sarvasy (2016b, 2019a).

²The Nungon adult corpus is archived in full with the Firebird Foundation. Individual components of the corpus may be obtained through written correspondence with the author. Open-access samples of Nungon natural speech are archived with CHILDES, at: <https://childes.talkbank.org/access/Other/Nungon/Sarvasy.html>.

are not used in the present chapter. Nungon examples here are followed by the title of the source text, where applicable, or labeled as constructed or drawn from the author’s field notes.

2 Nungon personal pronouns overview

Like many other Finisterre-Huon languages (McElhanon 1973: 21), Nungon has two personal pronoun paradigms, forming a “basic” pronoun set and an “emphatic” set (full discussion in Sarvasy 2017a: 351–359). The term “emphatic” is used in deference to the tradition in Finisterre-Huon linguistics (e.g. McElhanon 1973), though “self-intensifier” could be applicable Haspelmath 2023 [this volume]. Both sets combine with grammatical relation-marking postpositions to express agency, instrument, possession, location, and accompaniment. Third person pronouns from both sets can refer to inanimate objects.

Formally, the Nungon basic set includes reduced person/number distinctions compared to the emphatic set, as seen in Table 1. While the emphatic paradigm distinguishes each of the nine person/number categories, the basic paradigm includes only five distinct forms, conflating dual and plural number in the 1st and second person, and including a single form for 3rd person. Comparison with related Finisterre languages Nukna and Nek suggests that Nungon first and second person basic pronouns could have originally included distinct forms for dual number, **not* (1DU) and **hot* (2DU). These were eventually replaced, with the original plural (≥ 3) forms *non* and *hon* generalizing to encompass dual number as well (Sarvasy 2017a, 2018).

Table 1: Nungon personal pronouns

	singular		dual		plural	
	basic	emphatic	basic	emphatic	basic	emphatic
1	<i>nok</i>	<i>naga</i>	<i>non</i>	<i>nori</i>	<i>non</i>	<i>noni</i>
2	<i>gok</i>	<i>gaga</i>	<i>hon</i>	<i>hori</i>	<i>hon</i>	<i>honi</i>
3	<i>yu</i>	<i>ino</i>	<i>yu</i>	<i>yori</i>	<i>yu</i>	<i>yoni</i>

The basic personal pronouns are functionally unmarked, compared with the emphatic personal pronouns. But use of even the basic personal pronouns is more functionally marked than the absence of any explicit personal pronoun, which is the norm in Nungon discourse. In example (1), there is no personal pronoun or

other noun phrase explicitly encoding the subject argument of the verb, which is indicated through verbal inflection; here, no focus or contrast is entailed. But in (2), the presence of the basic personal pronoun with reference to the subject argument entails special focus with contrastive effect on the subject argument. Example (3) shows a third option with maximal contrast, achieved through an explicit emphatic pronoun. Since Nungon has no grammatical gender, in this chapter the unwieldy “s/he” will be avoided by arbitrarily choosing male or female gender for each English free translation of third person singular pronouns and actors.

- (1) *Ongo-go-k.*
go-RP-3SG
'She went.'
- (2) *Yu ongo-go-k.*
3.PRO go-RP-3SG
'She went.' (contrastive; this particular actor, not one or more others, went)
- (3) *Ino ongo-go-k.*
3SG.PRO.EMPH go-RP-3SG
'She herself went.' (maximally contrastive; this actor, not one or more others, possibly with special reason or purpose, went)

Emphatic pronouns always occur in focused, contrastive, or reflexive contexts. Because they are inherently focused, they rarely co-occur with the focusing postposition *=ho*, but are attested with almost all other postpositions. The only exception is the genitive postposition *=hon*, since the emphatic personal pronouns can take a special "emphatic genitive" suffix *-in* (homophonous with one of the Nungon locative markers), yielding genitive emphatic pronoun forms, used in contexts of focused, contrastive, or reflexive possession. Use of a genitive emphatic pronoun for contrast is exemplified in (4).

- (4) *Nan-na maa-no X, naga-in maa-na Y.*
father-1SG.POSS name-3SG.POSS X 1SG.PRO.EMPH-GEN name-1SG.POSS Y
'My father's name was X, my own name is Y.' [Waasiöng inoin hatno]

Examples (5–6) show use of the emphatic pronouns to highlight the similarity in attributes of two sets of actors, as a special type of contrast. Example (5) includes two personal pronouns. The first actor mentioned is referred to with a basic personal pronoun; the second set of actors are referred to with an emphatic

personal pronoun. Here, the basic pronoun occurs in a relatively neutral context, but the use of the emphatic pronoun highlights a relationship between the action by the first actor and that of a second set of actors (they all went in the same direction).

- (5) ... *nok e-n̩g n̩gi-yo=gon, yoni ongo-gu-n̩g-an...*
1SG.PRO come-DEP PROX-DEM=RESTR 3PL.PRO.EMPH go-RP-2/3PL-LOC
'... I coming along on this side, where they had gone...' [Waasiöng inoin hatno]

There is flexibility in the type of pronoun used to refer to the first actor presented in such contexts. For instance, in (6), the first set of actors in a similar relational context is referred to with an emphatic pronoun, not a basic pronoun (as in 5).

- (6) *Noni ino bom-mo.*
1PL.PRO.EMPH 3SG.PRO.EMPH semblance-3SG.POSS
'We are like Him.' [Context: church sermon, field notes]

Note that (6) is a verbless clause; example (7) is another verbless clause. In (7), the emphatic pronoun is used anaphorically, to refer back to a previously-mentioned tree species.

- (7) *Ino wo-rok=gon.*
3SG.PRO.EMPH DIST-SEMLBL=RESTR
'It is that same one.' [Geisch nanno orugo yup]

Emphatic pronouns, but not basic pronouns, can also occur as nominal modifiers after a name or pronoun, similar to English *he himself*. This is shown in (8).

- (8) *Dono oe-no=rot Yupna ongo-go-mok. Op-no,*
Dono woman-3SG.POSS=COMIT Yupna go-RP-1DU husband-3SG.POSS
wo-ma-i, Dono ino, Lae ong-un-a.
DIST-SPEC-TOP Dono 3SG.PRO.EMPH Lae go-DS.3SG-MV
'Dono's wife and I went to Yupna. Her husband, that is, Dono himself, having gone to Lae.' [Rosarin Yupna hain]

Here, the emphatic pronoun in *Dono ino* 'Dono himself' follows the name *Dono* without any intervening pause, very similarly to English 'Dono himself'.

3 Expression of reflexivity in Nungon

Demarcation of reflexivity is a specific sub-function of Nungon emphatic pronouns. The emphatic pronouns are obligatory for reflexive reading when the transitive subject argument and object argument or oblique argument are coreferential. All person/number combinations are eligible for reflexive readings. Coreference between transitive subjects and objects is discussed in §3.1, coreference between transitive subjects and oblique arguments is in §3.2, and other coreference contexts are covered in §3.4. Related expressions are in §4.

3.1 Coreference between subject and object

As noted above, all Nungon finite verbs index subject argument person/number through verbal suffixes. A closed sub-set of 15 transitive verbs also obligatorily index object person/number through prefixes that are often fused with the verb root. No other verbs index object person/number. In Nungon transitive clauses, the object argument itself may be: a) omitted and understood from context (9); b) referred to with an explicit noun phrase (10); c) referred to with a demonstrative or personal pronoun, and/or an object prefix on the verb; note that an explicit object noun phrase or pronoun can co-occur with a coreferential object prefix, as in (11).

- (9) *Honggit-ti!*
grab-IMP.2SG
'Grab it!' [Field notes]
- (10) *Inowak na-go-mong.*
cassava eat-RP-1PL
'We ate cassava.' [Rosarin Yupna hain]
- (11) *Nok na-no-ng n-u-ng=ir-a-ng.*
1SG.PRO 1SG.O-tell-DEP 1SG.O-roll.side.to.side-DEP=be-PRS.NSG-2/3PL
'They lie to me.' (literally: 'They address me and roll me from side to side') [Field notes]

When a transitive subject and object are exactly coreferential (see footnote 3), the object is referred to by an emphatic pronoun, as in (12–13).

- (12) *Ino wet-do-k.*
3SG.PRO.EMPH 3SG.O.kill-RP-3SG
'He killed himself.' [Field notes]

- (13) *Amna inggouk dogu-hi-k=ko ino aa-ng-a*
man one ghost-put-NMLZ=FOC 3SG.PRO.EMPH 3SG.O.see-DEP-MV
it-ta-k.
be-PRS.SG-3SG

‘One man is looking at himself in a mirror’, lit. ‘One man, (using) an image-placer, is looking at himself.’ [Picture description task 4]

Use of an emphatic pronoun is necessary for a reading in which subject and object arguments are coreferential in (12–13). As noted in Sarvasy (2017a: 355), representation of the object argument of a transitive verb with an emphatic pronoun does not necessarily entail coreference with the subject argument. An example from Sarvasy (2017a: 355) is reproduced in (14).

- (14) *Yoiwet-ton bök obö-ng-a, hara ino we-k.*
Yoiwet=GEN house break-DEP-MV almost 3SG.PRO.EMPH 3SG.O.kill-NP.3SG
‘Yoiwet_i’s house_j breaking, it_j almost killed her_i.’ [Field notes]

Here, the house (intransitive subject of the first clause, and transitive subject of the second clause) belonged to the person it nearly killed, that is, the second clause cannot be interpreted as ‘she killed herself’.

In contrast to antagonistic, “extroverted” actions (König & Siemund 2000: 61), as in (9), typical “introverted” actions that are expressed using reflexives in some languages take other forms in Nungon. For instance, Nungon *guo-* ‘bathe’ is an intransitive verb, which requires a further transitivizing expansion to express bathing someone else (Sarvasy 2017a: 513–516). In Nungon, “introverted” actions like ‘dress,’ ‘shave,’ and ‘apply make-up’ are expressed with the acted-upon element (a skirt or loincloth, or a possessed body part, see 21–23 below) as the transitive object, never exactly coreferential³ with the transitive subject, as in (15).

- (15) *Högök oe inggouk yangam-o uhok wo=hon wo=hon*
white woman one face-3SG.POSS color DIST=GEN DIST=GEN
ta-a-k.
do-PRS-3SG

‘One Caucasian woman_i applies make-up here and there to her_{i/j} face.’
[Picture description task 6]

³ Exact coreferentiality here means that two linguistic constituents refer to exactly the same referent. This is important in Nungon because such coreferentiality governs the distribution of switch-reference markers (Sarvasy 2015). In Nungon switch-reference, body parts are not exactly coreferential with their possessors (the beings to which they belong).

In such expressions, the body part is usually marked as possessed in the usual way, without additional marking to show coreference between subject argument and the possessor of the body part. Removed from any particular discourse context, the most natural interpretation of (15) is one of coreferentiality. But if a non-coreferential context had already been introduced (one woman applies make-up to another person's face), (15) would be acceptable in describing that situation as well. Introduction of the genitive emphatic pronoun to specify that only coreference is an acceptable interpretation would also introduce contrast, as seen in (16).

- (16) *Högök oe inggouk ino-in yangam-o uhok wo=hon*
 white woman one 3SG.PRO.EMPH-GEN face-3SG.POSS color DIST=GEN
wo=hon ta-a-k.
 DIST=GEN do-PRS-3SG
 'One Caucasian woman_i applies make-up here and there to her_i own face.'
 (Constructed)

The addition of the genitive emphatic pronoun implies that there are other potential faces to which the woman could be applying make-up, but that the woman is applying it only to her own. In the absence of such a context, (16) is less natural than (15).

It should further be noted that there are no clear examples in the Nungon adult corpus of "inclusive" co-referentiality between transitive subject and object argument, where coreference holds between one individual and a larger group which includes that individual. In Nungon, it is hypothetically possible, but not very natural, to explicitly break down complex groups into a pronoun conjoined with a noun phrase (?*naga orin amna torop* 'I myself and a group of men'). Thus cases of inclusive reference likely involve use of a single pronoun or a noun phrase (such as *noni* 'we' or *amna torop ambarak* 'the whole group of men') to describe the larger group. It seems likely that, if a pronoun is used, it would be the emphatic pronoun, but this remains to be tested.

3.2 Coreference between subject and oblique

As with coreference between transitive subject and object arguments, emphatic pronouns can be used to indicate coreference between a subject argument and oblique argument. However, unlike with subject/object coreference, it is unclear whether the emphatic pronouns are obligatory for obliques; it is likely that here basic pronouns can be substituted for emphatic pronouns with coreference still understood, in the right pragmatic and discourse-contextual circumstances.

Where used, the emphatic pronouns can be marked with postpositions and preserve the reflexive reading. Example (17) shows coreference between a subject argument and oblique beneficiary, and (18) shows coreference between a subject argument and oblique accompanier.

- (17) *Hu-ŋg* *ino=ha=gon* *ho-ŋg* *na-ŋg*
NSG.O.take.away-DEP 3SG.PRO.EMPH=BEN=RESTR cook-DEP eat-DEP
to-ŋg *it-do-k.*
do-DEP be-RP-3SG
'Taking them away, he used to cook and eat them (just) for himself.'
[Fooyu ketket dogu]
- (18) *Ni-ingat* *h-e-ŋg-a* *ino=rot*
1NSG.O-escort NSG.O-come-DEP-MV 3SG.PRO.EMPH=COMIT
n-öö-go-k.
1.o-ascend-RP-3SG
'Bringing us, he took us up along with him.' [Nusek Finsch hat]

Example (17) contrasts with (19), where there is no coreference between the subject and beneficiary.

- (19) *Tanak non=ta* *h-i-ŋg.*
food 1NSG.PRO=BEN cook-NP-2/3PL
'They cooked food for us.' (Constructed)

As the benefactive postposition can be used to mark recipients as well as beneficiaries, the same forms apply in such cases.

3.3 Coreference between subject and location

In actual discourse, subjects are rarely coreferential with spatial referents. (English *beside her* would be expressed with the comitative postposition *=rot*; *near her* would likely be expressed through the adjective *ambek* 'near' alone, without *her*; and *behind him* would be expressed as *mee-no-n* 'at his back'.) In one example from the Nungon adult corpus, a speaker uses the locative postposition *=dek* to describe location in discourse. Here, coreferentiality with the subject argument is expressed through use of the 1SG emphatic pronoun *naga* (marked with the locative postposition).

- (20) *Amna maa-no yo-wang-ka-t, naga=dek*
 man name-3SG.POSS say-PROB.SG-NF-1SG 1SG.PRO.EMPH=LOC
hi-ng-a, oruk-na-i=dek.
 put-DEP-MV brother.of.male-1SG.POSS-PL=LOC
 'I will say the men's names, starting from myself, on to my brothers.'
 [Böas babiya bök]

When the locative-marked referent is not coreferential with the subject argument and no contrast or focus is desired, either a basic pronoun or noun phrase can be used in place of the emphatic pronoun *naga* in (20).

3.4 Coreference in further domains

Reflexive interpretation is further possible in a range of other contexts, either with or without the emphatic pronouns. In these contexts, use of the emphatic pronouns usually entails a combination of reflexivity and contrast.

3.4.1 Coreference between subject and possessor

Coreference between the subject argument and possessor referent is not obligatorily indicated through use of the genitive emphatic pronouns, though this is a possibility. A coreferential interpretation is possible with no pronoun (21) or with a basic pronoun (22). It can also be specified with an emphatic pronoun (23).

- (21) *Babiya-no indar-a it-ta-k.*
 book-3SG.POSS read-MV be-PRS.SG-3SG
 'She_i is reading her_{i/j} book.' (Constructed)
- (22) *Yu=hon babiya-no indar-a it-ta-k.*
 3.PRO=GEN book-3SG.POSS read-MV be-PRS.SG-3SG
 'She_i is reading her_{i/j} book.' (Constructed)
- (23) *Ino-in babiya-no indar-a it-ta-k.*
 3.PRO.EMPH-GEN book-3SG.POSS read-MV be-PRS.SG-3SG
 'She_i is reading her_i book.' (Constructed)

All of the three options in (21–23) allow for reflexive interpretation; (21) is the most functionally unmarked and natural. In (21–22), choice of a reflexive interpretation would depend on contextual knowledge. While the reflexive interpretation is the only possibility for (23), use of the genitive emphatic pronoun there necessarily entails contrast along with reflexivity: either, a) that there are other

potential books with different owners available to the reading person, or b) that the reader actually wrote the book herself.

The same options are available when the possessed object is animate/human, as in the Nungon translations of *She killed her friend*, *He saw his boss*, etc. With these, as with (21–23), the use of a genitive-marked pronoun introduces mild (with the basic pronoun) or strong (with the emphatic pronoun) contrast, as well as, if the emphatic pronoun is used, reflexivity.

3.4.2 Coreference of non-subject arguments

Coreference between two non-subject arguments is rare-to-nonexistent in the Nungon adult corpus. It may be assumed that this is dispreferred in discourse more generally. But if it were to occur, there would likely be three ways of expressing such coreference, as with coreference of subject argument and possessor. Example (24) shows the absence of any pronoun referring to the recipient argument of ‘show’ (who is also the possessor of ‘her picture’), (25) shows the use of a basic pronoun for the possessor, and (26) shows the use of an emphatic pronoun (in Nungon, the word dogu ‘ghost’ is used for ‘image/picture/photograph’).

- (24) *Dogu-no y-ande-ha-k.*
ghost-3SG.POSS 3.o-show-PRS.SG-3SG
'She_i shows her_j her_{i/j} picture.' (Constructed)
- (25) *Yu=hon dogu-no y-ande-ha-k.*
3.PRO=GEN ghost-3SG.POSS 3.o-show-PRS.SG-3SG
'She_i shows her_j her_{i/j} picture.' (Constructed)
- (26) *Ino-in dogu-no y-ande-ha-k.*
3.PRO.EMPH-GEN ghost-3SG.POSS 3.o-show-PRS.SG-3SG
'She_i shows her_j her own_{i/j} picture.' (Constructed)

Here, even (26) is still ambiguous, in that the picture could belong to the showing person or the viewing person. Such ambiguity would be reduced if one of the parties were first or second person, as in (27).

- (27) *Ino-in dogu-no y-ande-ha-t.*
3.PRO.EMPH-GEN ghost-3SG.POSS 3.o-show-PRS.SG-1SG
'I show her_i her own_{i/j} picture.' (Constructed)

Here, the picture could still belong to a third party, distinct from the showing and viewing people, but it could not belong to the showing person, who is specified to be (1SG).

3.4.3 Coreference across clauses

Coreference across clauses – whether subordinate clauses, coordinated independent clauses, or coordinated dependent clauses in chains – is most often not indicated through the use of an emphatic pronoun. Clause chains in particular involve another highly efficient means to track subject reference across clauses: switch-reference marking. With Nungon switch-reference, any change in subject reference from clause A to clause B within a chain requires that the verb in clause A bears switch-reference marking, even if the referent of clause A's subject is included within that of clause B, or vice versa. This means that a listener has a clear idea at any time of the co-referentiality of subjects across clauses. While there is no similar grammatical means for tracking object or other argument reference through a clause chain, it stands to reason that knowing the reference of the subject argument of each clause can help in whittling down options for object reference in cases of ambiguity. Nungon switch-reference marking is described in detail in Sarvasy (2015, 2017a).

In clause chains, as elsewhere in the language, arguments normally lack expressions such as explicit pronouns or noun phrases if they are deemed recoverable from context. If reflexive and/or contrastive effects are desired, pronouns can be introduced: basic pronouns, for weak contrast, and emphatic pronouns for strong contrast, as in (28), where a boy shoots at a ghost, but the arrows bounce back at him, instead of hitting the target.

- (28) *Dogu tem-un-a wo-rok, gun=to hata-ng
ghost 3SG.o.shoot-DS.3SG-MV DIST-SEMLB arrow=FOC jump-DEP
ino hai-ng=gon to-ng it-do-k.
3SG.PRO.EMPH cut-DEP=RESTR do-DEP be-RP-3SG*
'He_i having shot at the ghost, then, the arrow would just jump and strike him_i (instead).' [Fooyu ketket orin dogu]

In these cross-clausal coreference contexts Nungon emphatic pronouns indicating coreference frequently occur in grammatical subject function. Example (29) is reported speech from a woman observing that, while the person she sought to meet with was not at home, he had left his portable solar charger unattended on a mound beside his house, so he could not have gone very far.

- (29) *Maa-no maa-no-no imbange orogo hinom*
name-3SG.POSS name-3SG.POSS-3SG.POSS wonderful good INTENS
wo-ma-i ngo-rok it-ta-k, ino ma=ngo-k.
DIST-SPEC-TOP PROX-SEMLB be-PRS.SG-3SG 3SG.PRO.EMPH NEG=go-NP.3SG
'His_i wonderful, very nice stuff (lit. 'its name, its name') is here like this,
(so) he himself_i hasn't gone.' [Rosarin Yupna hain]

In (29), the initial reference to the absent man is as possessor, marked with the 3sg possessive suffix *-no*, which does not have the possibility to be marked as reflexive or non-reflexive. The second reference to him is then through the emphatic pronoun *ino*, which serves as intransitive subject of the second clause.

4 Expanded types of reflexivity in Nungon

The personal pronouns can further combine with three postpositions related to reflexivity. Two of these only co-occur with emphatic pronouns: *=nang*, which relates to physical isolation ('alone'), and the "autoreflexive" *=wut*, indicating 'of one's own power.' The durative/restrictive *=gon*, which means roughly 'on one's own' when used with personal pronouns, indicates a more general type of aloneness than either *=nang* or *=wut*.

5 Conclusions

In sum, formal marking of reflexivity in Nungon is achieved through use of emphatic personal pronouns: a second set of personal pronouns with more person-/number distinctions than the "basic" set. The emphatic pronouns also function more generally to indicate contrast and focus; reflexivity can be understood to be a restricted sub-category of contrast.

That said, the Nungon emphatic personal pronouns are only obligatory for indication of reflexivity when the co-reference relation is between the transitive subject and object arguments. In all other contexts, the Nungon discourse style is highly permissive of formal ambiguity, apparently to be resolved by the listener based on discourse-contextual knowledge.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

DS	different-subject	PRO	pronoun
EMPH	emphatic	PROB	probable
IMP	immediate imperative	RESTR	restrictive
INTENS	intensifier	RP	remote past
MV	medial verb	SEMLB	semblance
NF	near future	SPEC	specifier
NP	near past	TOP	topicalizer
NSG	non-singular		

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Chapter 18

Reflexive constructions in Walman

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Walman has two reflexive constructions, one involving a verbal prefix that occurs in the same position as first and second person object prefixes, the other a nominal construction that combines the genitive form of a pronoun with a word *ein*, which otherwise means ‘base of tree’ or ‘reason’. The verbal prefix is also used as a reciprocal construction and the majority of instances of the verbal prefix in texts are either reciprocal or lexicalized.

1 Introduction

In this paper, we discuss two reflexive constructions in Walman, a language in the Torricelli family spoken on the north coast of Papua New Guinea (Figure 1).

One of these constructions is a verbal strategy; it involves a verbal prefix in the same position in the verb as first and second person object prefixes. The other construction is a nominal strategy and involves the genitive form of a personal pronoun followed by the word *ein* ‘base (of tree), reason’. In §2, we give a brief overview of Walman morphology. In §3, we describe the verbal reflexive construction. In §4, we discuss lexicalized instances of the verbal reflexive construction. In §5, we describe the nominal reflexive construction. And in §6, we illustrate uses of the nominal reflexive construction as a marker of focus.





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Figure 1: Location of Walman and the other Torricelli languages (unlabeled dots)

2 Brief overview of Walman morphology

Walman verb morphology involves subject prefixes, object affixes, an applicative affix, and a largely obsolete imperative construction. In (1), for example, all four verbs illustrate the 1SG subject prefix *m-*, while the verb *maltawron* ‘I look for him’ also illustrates the [3SG.M] object suffix *-n*, and the verb *mare* ‘I ask her’ (part of an idiom *esi are* ‘meet, encounter’) illustrates the null [3SG.F] object suffix.

- (1) *Kum pe m-altawro-n runon, m-orou m-esi m-are-∅ chuto.*
1SG still 1SG-look.for-3SG.M 3SG.M 1SG-go 1SG-arrive 1SG-ask-3SG.F
woman
‘I was still looking for him when I met a woman.’

For the majority of transitive verbs, the third person object affixes are suffixes, like *-n* in (1). However, for a minority of verbs, they are infixes, like the [3PL] object infix *-y-* in *kayko* ‘we eat them’ in (2).

- (2) *Kipin mon k-a-y-ko wuem alikiel.*
1PL NEG 1PL-eat<3PL> fish gills
‘We don’t eat the gills of a fish.’

The first and second person object affixes are prefixes that follow the subject prefixes, like the first person object prefix *p-* in *npaltawro* ‘He looked for me/us’ in (3).

- (3) *Runon n-arau n-p-altawro kum m-ch-a.*
 3SG.M 3SG.M-go.up 3SG.M-1OBJ-look.for 1SG 1SG-2OBJ-and
 ‘He came up and looked for us.’

The first and second person object prefixes code person but not number. Example (3) also illustrates the second person object prefix *ch-* in the form *mcha* ‘me and you’, and furthermore demonstrates the use of a verb *-a* for ‘and’ in Walman, where the first conjunct is the subject of the *and*-verb and the second conjunct is the object (Brown & Dryer 2008). Table 1 lists the form of the subject and object affixes.

Table 1: Subject and object affixes

Subject	Prefixes	Object affixes
1SG	<i>m-</i>	<i>p-</i>
1PL	<i>k-</i>	<i>p-</i>
2SG	<i>n-</i>	<i>ch-</i>
2PL	<i>ch-</i>	<i>ch-</i>
3SG.F	<i>w-</i>	<i>-Ø</i>
3SG.M	<i>n-</i>	<i>-n</i>
3SG.DIM	<i>l-</i>	<i>-l</i>
3PL	<i>y-</i>	<i>-y</i>

Walman has an applicative construction that usually has either benefactive or external possession meaning, the former illustrated in (4), the latter in (5). In (4), for example, the verb *nayawron* bears a 3SG.M subject prefix *n-*, an applicative suffix *-ro*, and a [3SG.M] object suffix *-n* indexing the applied object.¹

- (4) *Runon n-ayaw-ro-n nyi.*
 3SG.M 3SG.M-light.fire-APPL-3SG.M fire
 ‘He lit a fire for him.’

¹The regular form of the applicative suffix is *-re* ~ *-ro*, the choice between these based on vowel harmony. Some applicative forms are irregular, like the stem *-narin* in (6) below.

- (5) *Kum m-aram-re-n* *kayal runon*
1SG 1SG-step.on-APPL-3SG.M foot 3SG.M
'I stepped on his foot.'

The applicative construction is the only way to express a benefactive in Walman. Most applicative verbs in Walman are applicatives of transitive verbs. Applicatives of intransitive verbs do not have benefactive or external possession meanings, but simply add an argument. For example, the applicative of the intransitive verb for 'speak' adds a object denoting the addressee, as in (6).

- (6) *Ngan n-p-narin* *komunngan kipin.*
father 3SG.M-1OBJ-speak.APPL story 1PL
'Father told us a story.'

Applicatives of transitive verbs sometimes inflect for two objects, as in (7), where the applied object is indexed by the first person prefix *p-* and the basic object by the third plural suffix *-y*.²

- (7) *Chi n-p-olk-ro-y* *wiey kum.*
2SG 2SG-1OBJ-pick-APPL-3PL two 1SG
'Pick two for me!'

The only case morphology in the language is genitive case forms of pronouns, illustrated by the forms *wkum* 'my' and *wchi* 'your' in (8).

- (8) *Chrieu w-kum y-ch-arien* *nakol w-chi.*
marks GEN-1SG 3PL-2OBJ-be.at:APPL house GEN-2SG
'My books are in your house.'

These genitive forms are used in the nominal reflexive construction described in §4 below, even when the reflexive is not functioning as a possessor.

The nongenitive and genitive forms of the personal pronouns are shown in Table 2. Except for the [3SG.M] form *mnon*, the genitive forms are formed with a prefix *w-*.

²With applicative verbs with two objects, we refer to the object that is not the applied object, the one that corresponds to the object of the corresponding nonapplicative verb, such as *wiey* 'two' in (7), as the basic object.

Table 2: Personal pronouns

	SG		PL	
	Nongenitive	Genitive	Nongenitive	Genitive
1	<i>kum</i>	<i>wkum</i>	<i>kipin</i>	<i>wkipin</i>
2	<i>chi</i>	<i>wchi</i>	<i>chim</i>	<i>wchim</i>
3.F	<i>ru</i>	<i>wru</i>	<i>ri</i>	<i>wri</i>
3.M	<i>runon</i>	<i>mnon</i>	<i>ri</i>	<i>wri</i>
3.DIM	<i>rul</i>	<i>wrul</i>	<i>ri</i>	<i>wri</i>

3 The reflexive-reciprocal prefix

Walman has a reflexive-reciprocal prefix *r-* that occurs in the same position as the first and second person object prefixes, immediately following the subject prefix, as in (9), with the verb *-eni* ~ *-enie* ‘to call someone something’.

- (9) *Runon n-r-eni* *Matthew.*
 3SG.M 3SG.M-REFL/RECP-call Matthew
 ‘He calls himself Matthew.’

Compare (9) to (10), where instead of a reflexive-reciprocal prefix, we have a first person object prefix *p-*.

- (10) *Runon n-p-eni* *kum Amos.*
 3SG.M 3SG.M-1OBJ-call 1SG Amos
 ‘He called me Amos.’

Example (11) illustrates the same verb with a 3SG.M object suffix.

- (11) *Kum m-enie-n* *runon Amos.*
 1SG 1SG-call-3SG.M 3SG.M Amos
 ‘I called him Amos.’

The form of the stem in (11) is *-enie*, in contrast to the form of stem in (9) and (10), where it is just *-eni*. Many Walman verbs use a stem with object prefixes that is different from the stem used with object suffixes and infixes.

The three examples in (12) to (14) are analogous to those in (9) to (11), except that they involve an applicative verb, namely *-ayakro* ‘to make something for

someone (or of someone's)', the applicative of *-ayako* 'make, do, happen to'. Example (12) illustrates the reflexive/reciprocal prefix *r-*, in this case coding the applied object. The verb also exhibits [3SG.F] agreement with the basic object *nakol* 'house'.

- (12) *Runon n-r-ayak-ro-Ø* *nakol.*
3SG.M 3SG.M-REFL/RECP-make-APPLIC-3SG.F house
'He built a house for himself.'

The same verb is in (13), but with a first person object prefix *p-*. The verb also exhibits 3PL agreement with the other object *lei* 'arrow(s)'.

- (13) *Ngan n-p-ayak-ro-y* *lei kum.*
father 3SG.M-1OBJ-make-APPLIC-3PL arrow 1SG
'Father made arrows for me.'

Example (14) illustrates the same verb with a 3SG.M applied object. With verbs that are applicatives of those verbs that take third person object suffixes (as opposed to infixes), the verb only inflects for the applied object, in (14) with the [3SG.M] suffix *-n*.

- (14) *Kum m-ayak-ro-n* *wako runon.*
1SG 1SG-make-APPL-3SG.M boat 3SG.M
'I made a boat for him.'

The reflexive-reciprocal prefix can be used for the recipient of the verb for 'give', as in (15).

- (15) *Kum m-r-erie* *oputo nyukuel chomchom.*
1SG 1SG-REFL/RECP-give yam food much
'I gave myself a lot of food.'

However, the form of the stem here is different from the normal stem of this verb and only occurs with the reflexive-reciprocal prefix. The usual stem for 'give' is *-eyie* ~ *-e*, as in (16).

- (16) *Chi n-eyie-n* *runon momol?*
2SG 2SG-give-3SG.M 3SG.M what
'What did you give him?'

The reflexive of this verb is also used for dressing oneself, as in (17).

- (17) *Kamany y-r-erie chno y-akie porukul.*
 person 3PL-REFL/RECP-give traditional.dress 3PL-dance dancing
 'People put on traditional dress and dance.'

As noted above and illustrated in (6), expression of telling in Walman involves the applicative of the verb for 'speak' and the addressee can be reflexive, as in (18).

- (18) *Kum m-r-narin.*
 1SG 1SG-REFL/RECP-speak.APPL
 'I talk to myself.'

When the subject is plural, sentences are ambiguous (or vague) out of context between a reflexive reading and a reciprocal reading. However, in practice, the intended reading of such sentences is more often reciprocal, presumably because reciprocal readings are usually more natural than reflexive readings. In (19), for example, the form *yroko* is the reflexive-reciprocal form of the verb *-oko* 'take', here meaning 'marry', and the intended reading is reciprocal, a reflexive reading not making sense here.

- (19) *Nyakom w-ri ke y-r-oko, nyakom y-awaro-y.*
 child.PL GEN-3PL also 3PL-REFL/RECP-take child.PL 3PL-be.parent.of-3PL
 'Their children also married each other and had children.'

We will refer to the reflexive-reciprocal prefix as an object affix because it is in paradigmatic opposition to the first and second-person object prefixes, and because it codes the fact that the object is identical in reference to the subject. For present purposes, we treat something as an object grammatically if it is coded on the verb with an object affix. We are not aware of any useful criterion for objecthood in Walman other than the possibility of being coded by an object affix.

Expressions of situations in which someone does something that affects a body part of their own frequently employ the reflexive-reciprocal prefix, as in (20–21).

- (20) *Kum m-r-ulō wi.*
 1SG 1SG-REFL/RECP-cut hand
 'I cut my hand.'
- (21) *Runon n-r-ata ngelie.*
 3SG.M 3SG.M-REFL/RECP-bite tongue
 'He bit his tongue (accidentally).'

Sentences involving someone doing something that affects someone else's body part are similar, with the verb exhibiting object inflection for the person, number and gender of the individual whose body part is affected, as in (22).

- (22) *Ru w-p-ulo woruen.*
3SG.F 3SG.F-1OBJ-cut hair
'She cut my hair.'

In (22), the noun *woruen* 'hair' is not the object, but a type of nonobject complement, the object being expressed by the first person object prefix on the verb. Similar comments apply to *wi* 'hand' in (20) and *ngelie* 'tongue' in (21).

Expressions of washing are more complex. First, there is an intransitive verb *okorue* ~ *-korue* that denotes only washing oneself, without reflexive-reciprocal morphology, as in (23).

- (23) *Kum m-okorue wul.*
1SG 1SG-bathe water
'I bathed.'

This verb normally combines with the noun *wul* 'water', as in (23). There is also a transitive verb *-ko_wue*³ for washing somebody else, as in (24), where the subject and object involve distinct participants.

- (24) *Runon n-p-kowue wul kum.*
3SG.M 3SG.M-1OBJ-wash water 1SG
'He washed me.'

This verb can be used with a reflexive-reciprocal prefix, as in (25), but expressions of washing oneself in our data usually involve the verb *-okorue* ~ *-korue*, illustrated in (23) above.

- (25) *Kum m-r-kowue.*
1SG 1SG-REFL/RECP-wash
'I washed myself.'

There is a separate transitive verb *-olo* that is used for washing body parts, without reflexive-reciprocal morphology, illustrated in (26), where the body part is object.

³The underscore in *-ko_wue* indicates that this is a verb that takes third person object infixes rather than object suffixes, and the location of the underscore represents the location of the infix.

- (26) *Ch-orou ch-olo-y motu-kol.*
 2PL-go 2PL-wash-3PL finger-PL
 ‘Go and wash your hands.’

This is one of several verbs used for washing things other than oneself.

There are relatively few instances in our texts of uses of the reflexive-reciprocal prefix with specifically reflexive meaning. Two examples from texts are given in (27–28). In (27), *yrsapur* ‘they untangle themselves’ is a form of the verb *-sapur* ‘loosen, untangle’.

- (27) *Lasi ru w-aro-Ø y-r-sapur pra-pra*
 immediately 3SG.F 3SG.F-and-3SG.F 3PL-REFL/RECP-untangle loose-loose
lasi ru w-aro-Ø y-otoplo-n runon.
 immediately 3SG.F 3SG.F-and-3SG.F 3PL-tie-3SG.M 3SG.M
 ‘They (literally ‘she and her’) suddenly wriggled free (literally ‘untangled themselves’) and quickly wrapped themselves around him (literally ‘tied him’).’

There are two instances of the reflexive-reciprocal prefix in (28), in *nroko* and *wrulo*. While the literal meaning of *-oko* is ‘take’, it is combined in (28) with *rele* ‘beard’ to mean ‘shave’, so with the reflexive-reciprocal prefix, the meaning is ‘he shaves himself’.

- (28) *Ngan n-r-oko rele, nyue w-r-ulø woruen.*
 father 3SG.M-REFL/RECP-take beard mother 3SG.F-REFL/RECP-cut hair
 ‘The father shaves, the mother trims her hair.’

The uses of the reflexive constructions in (28) involve body parts, analogous to (20) to (22) above.

In some uses of the reflexive-reciprocal prefix, the subject is semantically both agent and theme but where many languages would not use a reflexive form. For example, the basic meaning of the verb *-a_pulu* is ‘to spread something around, pour’, as in (29).

- (29) *...o opucha runon n-oko-y n-a<y>pulu alpa-y*
 ...and thing 3SG.M 3SG.M-take-3PL 3SG.M-spread.around<3PL> one-PL
alpa-y y-anan y-an chapul.
 one-PL 3PL-go.down 3PL-be.at ground
 ‘...and he picked up things and spread them around on the ground.’

In (30), this verb is used in its reflexive-reciprocal form, with the meaning ‘to spread oneself around’; many languages would simply say something like ‘spread around’, without a reflexive form, even though the subject is both agent and theme.

- (30) *To Walman y-r-apulu alpa-y alpa-y y-ara*
then Walman 3PL-REFL/RECP-spread.around one-PL one-PL 3PL-come
y-ara y-an cha w-kipin eni k-an atuko.
3PL-come 3PL-be.at place GEN-1PL now 1PL-be.at south
‘The Walman people had spread out in separate groups all over the area,
coming nearer and nearer (to the coast) and settling in the places where
we now live.’

Similarly, the verb *-elie ~ -eli* ‘throw’ means ‘to move something back and forth’ when repeated, as in (31).

- (31) *Runon n-elie-n n-elie-n nyanam n-roul*
 3SG.M 3SG.M-throw-3SG.M 3SG.M-throw-3SG.M child 3SG.M-hang
yie.
 string.bag
 'He moved his baby son hanging in the string bag back and forth.'

In (32), we find the same repeated verb with the reflexive prefix.

- (32) *Runon n-r-eli n-r-eli.*
 3SG.MASC 3SG.MASC-REFL/RECP-throw 3SG.MASC-REFL/RECP-throw
 ‘He is swinging (on a swing).’

Again, the use of the reflexive form in (32) does involve identity of agent and theme, but many languages would simply express this meaning with something meaning ‘to move back and forth’, without any overt reflexive marking, as in English.

4 Lexicalized reflexive-reciprocal forms

There are many instances in which reflexive-reciprocal forms have apparently lexicalized with meanings that are not entirely predictable from the meaning of the verb of which they are reflexive-reciprocal forms (we say “apparently” since some of them might prove to simply be construals of verbs in particular contexts).

Example (32) above illustrates the use of repeating *-elie* ~ *-eli* ‘throw’ with the reflexive-reciprocal prefix to mean ‘to move oneself back and forth’, where the subject is both agent and theme. Example (33) is similar, but because the subject is inanimate, it is not both an agent and a theme, but only a theme.

- (33) *Yie w-r-eli w-r-eli.*
 bilum 3SG.F-REFL-throw 3SG.F-REFL-throw
 ‘The bilum is swinging (e.g., in the wind).’

This use involves the removal of the agent role and could be classified as an anticausative use.

The example in (34) also illustrates an instance where the semantic role normally associated with the subject of this verb is removed. However, in this case the verb cannot be classified as anticausative because the role that is removed is that of a nonagentive experiencer of the verb *-kay* ‘see’, rather than an agent. There may still, however, be an entailment of an unspecified experiencer, so that an English translation ‘it will be seen’ is natural.

- (34) ...*cha ru w-r-kay w-kipin olsem ri welimi*
 ...so.that 3SG.F 3SG.F-REFL/RECP-see GEN-1PL like 3PL younger.sibling.PL
wlapum.
 older.sibling:PL
 ‘...so that it will be seen that we are just the same as our brothers and sisters.’

Normally, the subject of a reflexive form of this verb is both experiencer (the one seeing) and stimulus (the one seen), but in (34), it is only stimulus.⁴

A different sort of lexicalization is reflected in (35), where the reflexive-reciprocal form of the verb *-e_risi*, a transitive verb normally meaning ‘to cook by boiling’, means something like ‘to be very ripe, to be beginning to rot’.

- (35) *Mikie w-r-erisi.*
 banana 3SG.F-REFL-cook.by.boiling
 ‘The bananas are rotting.’

The non-reflexive use of this verb is illustrated in (36).

⁴Grammatically, the subject in (34) is the [3sg.f] pronoun *ru*, which can be analysed as an expletive subject like *it* in the English translation. Semantically, the stimulus is the clause meaning ‘we are just the same as our brothers and sisters’, as it is in the English translation.

- (36) *To ngotu y-ulue-*Ø *y-e*<Ø>***risi***
 then coconut 3PL-scratch-3SG.F 3PL-cook.by.boiling<3SG.F>
y-a<Ø>*ko.*
 3PL-eat<3SG.F>
 ‘Then they scraped coconut, boiled it, and ate it.’

In (36), the subject is agent and the object is patient and with an ordinary reflexive verb, the subject would be both agent and patient. But like the verbs illustrated in (33–34), the semantic role of agent that the subject would normally have with the verb is removed in (35), so that the subject in (35) is just a patient. But in this case there is also an additional semantic change in that the banana is rotting, not undergoing the change of state associated with being boiled.

A similar example of lexicalization involves the reflexive-reciprocal form of the verb *-ikie* ‘put’, illustrated in (37).

- (37) *Runon n-r-ikie* *yal* *ein nganu wiey o kon alpa-*Ø.
 3SG.M 3SG.M-REFL/RECP-put breadfruit tree sun two and night one-F
 ‘He was stuck in the breadfruit tree for two days and a night.’

An example illustrating the non-reflexive use of this verb is given in (38).

- (38) *Chim ch-p-ikie kum m-an apar.*
 2PL 2PL-1OBJ-put 1SG 1SG-be.at bed
 ‘Put me on the bed.’

A literal interpretation of (37) would be that the man put himself up in the tree, but in the text from which this example comes, the man was put up in the tree by a flock of birds. So, like the preceding examples, the use of the reflexive-reciprocal form in (37) involves the removal of the agent. However, if that were the only difference, (37) would simply imply that he was up in the breadfruit tree, but the lexicalized use of this verb more specifically means that he was actually stuck up in the breadfruit tree and had no way to get down. Hence the lexicalization of the reflexivization of this verb also involves an added element of meaning beyond simply the removal of the agent.

A further example of a verb with lexicalized reflexive-reciprocal forms is the verb *-ayako* ‘make, do, cause, happen to’, whose stem with the reflexive-reciprocal prefix is *-any*. In fact, the reflexive-reciprocal form of this verb has a number of lexicalized meanings, though we restrict attention here to two of them. The first lexicalized meaning is ‘become’, as in (39).

- (39) *W-an w-an, eni w-r-any siar.*
 3SG.FEM-be.at 3SG.FEM-be.at now 3SG.FEM-REFL/RECP-make reef
 ‘And there it [the sago container] remained, until it became a reef.’

Again, this use involves removal of the semantic role that the subject of this verb would normally have (an agent, the maker). But if that were all that was involved, the meaning would be something like ‘the reef came into being’. In (39), however, *siar* ‘reef’ is not the subject, the subject (the sago container) being the thing that became a reef.⁵

A second lexicalized use of the reflexive-reciprocal form of *-ayako* ‘do, make, happen to’ is ‘happen’, illustrated in (40).⁶

- (40) *Orait ampa ru w-r-any w-ama eni nta.*
 OK FUT 3SG.FEM 3SG.FEM-REFL/RECP-make 3SG.FEM-like now this
 ‘Well, it should happen like this.’

This use is clearly related to the non-reflexive use of this verb with the meaning ‘happen to’, illustrated in (41).

- (41) *Momol w-p-any kipin?*
 what 3SG.FEM-1OBJ-make 1PL
 ‘What could have happened to us?’

Although the use of this verb in (40) is semantically monovalent, it differs from the other lexicalized uses above in that in these other cases, it is the semantic role of the subject that is removed, while with this use of *-rany* meaning ‘happen’, it is the semantic role of the object (the thing that something happens to) that is removed while the semantic role of the subject (the thing that happens) remains the same.

The last case we will discuss of a lexicalized use of the reflexive-reciprocal prefix is with the verb *-awukul* ‘lift’, whose reflexive-reciprocal forms mean ‘jump’, as in (42).

- (42) *Lasi n-ete-∅ may w-ama pin, lasi*
 immediately 3SG.M-see-3SG.F rope 3SG.F-like sling immediately
n-r-awukul n-aro-∅ tin may akou.
 3SG.M-REFL/RECP-lift 3SG.M-and-3SG.F tightly rope finish
 ‘He saw a vine like a sling, so he jumped and grabbed it tightly.’

⁵That *siar* ‘reef’ is not subject in (39) is clear from the fact that it follows the verb. Subjects in Walman invariably precede the verb.

⁶Words in non-italics, like *orait* in (40), are Tok Pisin words from modern texts. Contemporary Walman is frequently a mixture of Walman and Tok Pisin.

It is not immediately obvious that this use is lexicalized since one might argue that jumping really is simply lifting oneself. However, while this might apply to instances of jumping up, it is less obvious that jumping down, as in (43), involves lifting oneself, although perhaps even jumping down often initially involves slightly jumping up.

- (43) *Lasi runon n-r-awukul n-anan...*
 immediately 3SG.M 3SG.M-REFL/RECP-lift 3SG.M-go.down
 ‘He immediately jumped down...’

5 The nominal reflexive construction

In addition to the reflexive-reciprocal prefix on the verb, Walman also has a nominal reflexive construction, illustrated in (44–45), that involves combining the genitive form of a personal pronoun with the word *ein*, which has a range of meanings, the most basic of which is ‘base (of a tree)’ but which also can mean ‘cause, reason’. In both (44–45), the nominal reflexive is functioning as the object.

- (44) *Runon n-r-ulō mnon ein.*
 3SG.M 3SG.M-REFL/RECP-cut 3SG.M.GEN REFL
 ‘He cut himself.’
- (45) *Runon n-a nyoko seylieu n-r-ao mnon ein.*
 3SG.M 3SG.M-use bow foreigner 3SG.M-REFL/RECP-shoot 3SG.M.GEN REFL
 ‘He shot himself with the gun.’

All instances of this construction in our data combine with the reflexive-reciprocal prefix construction when it is an object which is coreferential with the subject, as in (44–45). We should also note that the only clear instances in our texts of the nominal reflexive construction involve the focus use discussed in the next section. Two further examples illustrating the simultaneous use of the two constructions are given in (46–47).

- (46) *Runon n-r-arien mnon ein “M-ayako-∅ momol?”*
 3SG.M 3SG.M-REFL/RECP-ask 3SG.M.GEN REFL 1SG-do-3SG.F what
 ‘He asked himself “What should I do?”’
- (47) *Runon n-r-etiki nyi mnon ein.*
 3SG.M 3SG.M-REFL/RECP-cook fire 3SG.M.GEN REFL
 ‘He burnt himself in the fire.’

Examples (48–49) are similar, except in these cases, the object is an applied object in an applicative clause. In (48), the verb *nroruen* ‘he cried for himself’ is the applicative of an intransitive verb *-oruen* ‘cry’.

- (48) *Nyue w-elpete-n runon n-r-oruen*
 mother 3SG.F-quarrel.with-3SG.M 3SG.M 3SG.M-REFL/RECP-cry-APPL
mnon ein.
 3SG.M.GEN REFL

‘When his mother yelled at him, he cried for himself.’

In (49), the verb *nrapulun* ‘you pour it for yourself’ is a form of the applicative of a transitive verb *-a_pulu* ‘pour, spread around’, so the clause contains two objects, the applied object *wchi ein* ‘yourself’, indexed on the verb by the reflexive reciprocal prefix *r-*, and the basic object *wul* ‘water’.

- (49) *Chi n-r-a<Ø>pulun wul w-chi ein.*
 2SG 2SG-REFL/RECP-pour.APPL<3SG.F> water GEN-2SG REFL
 ‘Pour yourself some water.’

The nominal reflexive construction in Walman normally consists of the genitive form of a pronoun followed by the word *ein*. But an alternative to the use of a personal pronoun is a noun phrase consisting of an *and*-verb where both conjuncts are pronominal. In (50), for example, the nominal reflexive construction is *wru waro ein*, where *wru waro*, literally ‘of her and her’ is functioning like a pronoun denoting the same two women as the subject *ru waro* ‘she and her’. The first conjunct is represented by both the pronoun *ru* and the [3SG.F] prefix on *waro* and the second conjunct is represented by the null [3SG.F] object marking on *waro*. Apart from the fact that *wru* is in genitive form, *wru waro* is identical to *ru waro*. Since the nominal reflexive construction normally involves a personal pronoun followed by *ein*, the use of *wru waro* in *wru waro ein* means that *wru waro* is behaving here like a personal pronoun.

- (50) *Ru w-aro-Ø y-r-apulun wul w-ru*
 3SG.F 3SG.F-and-3SG.F 3PL-REFL/RECP-pour.APPL water GEN-3SG.F
w-aro-Ø ein.
 3SG.F-and-3SG.F REFL
 ‘The two women poured water on themselves.’

It is also possible to use the nominal reflexive construction with possessors, as in (51), in which case we do not get the reflexive-reciprocal prefix on the verb.

- (51) *Kum m-a<Ø>ko ngu w-kum ein m-apa-Ø.*
 1SG 1SG-eat<3SG.F> excrement GEN-1SG REFL 1SG-excrete-3SG.F
 ‘I was eating my own feces, which I just excreted.’

In fact, it is possible to have a reflexive-reciprocal verbal prefix in addition to the nominal reflexive construction on a possessor, if the verb is applicative, since one of the meanings associated with the applicative construction is that of external possession, as in (52–53).⁷

- (52) *Runon n-r-a<Ø>pon wuel mnon ein*
 3SG.M 3SG.M-REFL/RECP-kill.APPLIC<3SG.F> pig 3SG.M.GEN REFL
n-a<Ø>ko.
 3SG.M-eat<3SG.F>
 ‘He killed his own pig to eat.’
- (53) *Runon n-r-lre-* *nchong nyi nakol*
 3SG.M 3SG.M-REFL/RECP-light.fire.APPLIC-3PL catch fire house
mnon ein.
 3SG.M.GEN REFL
 ‘He set fire to his own house.’

It is also possible to combine the reflexive-reciprocal prefix with the nominal construction marking a possessor if the thing possessed is a body part and the act denoted by the verb applies both to the referent of the subject and the body part, as in (54–55).

- (54) *Runon n-r-kay chkuel nyamayki mnon ein.*
 3SG.M 3SG.M-REFL/RECP-see eye nose 3SG.M.GEN REFL
 ‘He sees his own face.’
- (55) *Runon n-r-ako motu mnon ein*
 3SG.M 3SG.M-REFL/RECP-eat finger 3SG.M.GEN REFL
 ‘He bit his finger.’

The possibility of using the nominal reflexive construction more generally on possessors is illustrated by (56) to (58). In (56), the possessor *wkipin ein* ‘of ourselves’ is modifying the noun *wlroy* ‘desire’, which in turn is the complement

⁷Note that the verb *nrlrey* in (52) bears both a reflexive-reciprocal prefix and a [3PL] object suffix. This object suffix is agreeing with *nyi* ‘fire’, which is pluralia tantum in Walman and always triggers plural agreement.

of the word *wama*, formally a form of the verb *-ama* ‘be like’, but in an impersonal use since there is no apparent [3SG.F] trigger for the prefix *w-* on *wama* (suggesting that this has become grammaticalized as a preposition).

- (56) *Kipin k-oko-y w-ama wlroy w-kipin ein.*
 1PL 1PL-take-3PL 3SG.F-like desire GEN-1PL REFL
 ‘We marry them of our own free will.’

It is also possible for the nominal reflexive to function as a long distance reflexive, but only if it is a possessor in a subordinate clause, coreferential with the subject of the matrix clause. In (57), for example, *mnon ein* is the possessor of the object in the subordinate clause but refers back to the subject of the matrix clause.

- (57) *Runon n-napi kum m-ao-n ngan mnon ein.*
 3SG.M 3SG.M-say 1SG 1SG-shoot-3SG.M father 3SG.M.GEN REFL
 ‘He said that I shot his father.’

Similarly, in (58), *mnon ein* functions as the possessor of the subject of the subordinate clause, but refers back to the subject of the matrix clause.

- (58) *Runon n-napi ngan mnon ein n-ao-n runon*
 3SG.M 3SG.M-say father 3SG.M.GEN REFL 3SG.M-shoot-3SG.M 3SG.M
 ‘He said that his very own father shot him.’

We have one text example, given in (59), in which the antecedent of a nominal reflexive is the subject of the first verb in a sequence of verbs with different subjects and where the clause in which the nominal reflexive occurs is not a subordinate clause. *Mnon ein* is the object of *warien* ‘it hit him’ whose subject is the breadfruit, which is also subject of the two verbs *wan* ‘it was at’ and *wanan* ‘it went down’ that precede *warien* ‘it hit him’. But the antecedent of *mnon ein* is *runon* ‘3SG.M’ and intervening between *runon* and the verbs whose subject is the breadfruit is another verb *mlko* ‘I broke it off’ with a 1SG subject *kum*.

- (59) *Runon n-p-narin kum, to kum m-lko-∅*
 3SG.M 3SG.M-1OBJ-speak.APPL 1SG then 1SG 1SG-break.off-3SG.F
yal w-an karwal, w-anan, w-arie-n mnon
 breadfruit 3SG.F-be.at tree.top 3SG.F-go.down 3SG.F-hit-3SG.M 3SG.M.GEN
ein woruen amungko.
 REFL head bone
 ‘He spoke to me and then I picked a breadfruit that was at the top of the tree, and it came down and hit him on the head.’

Since this is the only example that we have like this, we are not sure what constraints there might be on how far a nominal reflexive can be separated from its antecedent. It is also possible that this is an instance of the focus use of the nominal reflexive discussed in the next section.

We should note that the nominal reflexive construction is never obligatory for possessors. In (60), for example, we get *ngan wkum* ‘my father’, not *ngan wkum ein*, even though it refers back to the subject *kum*.

- (60) *Kum m-tkre-n ngan w-kum.*
1SG 1SG-do.same-3SG.M father GEN-1SG
'I do things like my father.'

Similarly, in (61), we get *cha wri* ‘their village’, not *cha wri ein*, even though it refers back to the subject *ri Chnapeli* ‘the Chinapelli’.

- (61) *Ri Chnapeli y-orou cha w-ri.*
3PL Chinapelli 3PL-go place GEN-3PL
'The Chinapelli returned to their own village.'

The nominal construction can also be used for reciprocal situations, as in (62), but again note that the verb contains the reflexive-reciprocal prefix *r-*.

- (62) *Ri y-r-ao w-ri ein.*
3PL 3PL-REFL/RECP-shoot GEN-3PL REFL
'They shot each other.'

6 Focus use of the nominal reflexive construction

Similar to what we find in many other languages, the nominal reflexive construction in Walman is sometimes used as a marker of focus (König et al. 2013), as in (63).

- (63) *Walman mlin w-ri ein y-ayako-∅ woyue.*
Walman true GEN-3PL REFL 3PL-make-3SG.F bad
'The real Walman themselves made a mistake.'

When the item in focus is a personal pronoun not functioning as a possessor within a noun phrase, the pronoun occurs either in genitive form, as in (64), or in nongenitive form, as in (65–66). The focused element in (64) is the first conjunct of *naro* ‘you (sg.) and her’, which functions, in turn, as the subject of *charul* ‘you (pl.) flee’.

- (64) *Korue, w-chi ein n-aro-∅ ch-arul ch-ara.*
 no GEN-2SG REFL 2SG-and-3SG.F 2PL-flee 2PL-come
 ‘No, you [you yourself and her] have come here of your own accord (i.e. not through my magic).’

In (65), *kipin ein* ‘we ourselves’ is the subject.

- (65) *Kipin ein monap k-ayako-∅ koruen.*
 1PL REFL cannot 1PL-make-3SG.F NEG
 ‘We ourselves are not able to make any.’

In (66), *kipin ein* is the second conjunct of a conjoined noun phrase functioning as the goal of the verb *wrukuel* ‘run’.

- (66) *Ri y-alma yikel w-rukuel kalway ro w-ri y-an Prou Wokau o kipin ein.*
 3PL 3PL-die words 3SG.F-run blood part GEN-3PL 3PL-be.at Prou Wokau and 1PL REFL
 ‘When they die, a message goes around to their blood relations living in Prou or Wokau, and even amongst ourselves.’

In (67), *wkipin ein* is functioning as a possessor in *ala wkipin ein* ‘our business’.

- (67) *Kipin save k-an k-uruer k-r-elpete wkan a*
 1PL know 1PL-be.at 1PL-fight 1PL-REFL/RECP-quarrel.with later PTCL
pa ala w-kipin ein...
 that work GEN-1PL REFL
 ‘We know that if we fight and quarrel later, that’s our business, [not yours].’

As noted above, the only clear instances in our texts of the nominal reflexive construction involve the focus use. This raises the possibility that the nominal reflexive construction in Walman is only used for focus.

7 Conclusions

In conclusion, Walman has two reflexive constructions, one involving a verbal prefix which is in paradigmatic opposition to first and second person object prefixes, the other a nominal reflexive construction that combines a personal pronoun with a word *ein*, whose meanings outside this construction include ‘base of

tree' and 'reason'. Both constructions are also used for reciprocals. The construction with the verbal prefix has also developed idiosyncratic meanings with some verbs. The nominal reflexive construction is also used as a focus construction and in fact it is possible that all instances of the nominal reflexive construction are really instances of focus.

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Chapter 19

Reflexive constructions in Waray

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Waray is an Austronesian language spoken in the Eastern Visayas region of the Philippines. In this paper, we argue that reflexive constructions of all types employ a morphologically complex reflexive nominal *kalugaríngon*. This nominal, based on the root *lugaring* ‘to self-rely’/‘do on ones own’, obligatorily expresses the undergoer when actor and undergoer in the same clause are coreferential. It also may refer to locative and genitive elements within a clause, and elements of dependent clauses (long-distance coreference), when these are coreferential with a qualifying antecedent. Depending on the context, the use of the reflexive nominal as an oblique nominal, genitive nominal, or in long distance coreference may not be required, but rather has a self-intensifying function. Finally, several examples from a large corpus of natural texts are presented and discussed.

1 Introduction

Waray (also called Waray-Waray, Winaray, or Leyte-Samarnon) is the mother tongue and language of wider communication for most inhabitants of the provinces of Samar, Eastern Samar, Leyte and parts of Biliran in the Eastern Visayas region of the Philippines. With over three million speakers, it is the sixth most widely spoken language in the country. Unless otherwise specified, examples appearing in this paper are from Northern Leyte. Figure 1 indicates in red the area where Waray is spoken.

Waray is a member of the Greater Central Philippine (GCP) sub-family of the Malayo-Polynesian family, Austronesian phylum (Blust 1991). Although we



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Figure 1: Location of Waray

have not systematically investigated reflexive constructions in all GCP languages, deep personal experience with several GCP languages leads us to believe the generalizations presented here are applicable throughout the subfamily. Nevertheless, specific data and analyses in this paper are applicable only to Waray, and not necessarily to all GCP, much less to all “Philippine type” languages.

The present study is based on native-speaker competence, a large corpus of spoken and written data (3NS Corpora project – hereafter referred to as “the corpus”), published material in Waray, and extensive input from teachers, students, and intellectual leaders throughout the Waray speaking region. When no reference to the corpus is indicated, the examples cited are from conversations between native speakers.

In this paper, we show that reflexivity in Waray is consistently expressed by the nominal reflexivizer *kalugaríngon* ‘self’. Agent-patient coreference can sometimes be expressed by simple intransitive constructions, but such examples may

have non-reflexive interpretations depending on the context (see examples such as 18b below).

We observe that such a phonologically “large” and morphologically complex nominal reflexivizer runs counter to the observation that reflexive constructions are usually expressed by phonologically reduced, or in other ways grammaticalized forms (pronouns, clitics or affixes) in the world’s languages. We speculate that this counter expectation may be explained by the fact that in Waray traditional culture, doing something “to oneself”, “by oneself”, “with oneself” or “for oneself” is considered culturally odd, marginal or aberrant. Indeed, ideas expressed by *kalugaríngon* constructions often have socially undesirable connotations that are not present in the free English translations.

The outline of the paper is the following. We begin with a brief description of the morphosyntactic typology of Waray (§2), and the pronoun system (§3). Out-of-context examples of various types of reflexive constructions are presented in §4 through §8. In §9, we speculate on the possible motivations for the nominal character of the Waray reflexive word. In §10, we present and discuss several examples of *kalugaríngon* from a large corpus of natural texts. Our general conclusions are presented in §11. A list of formatting conventions and abbreviations follows, before the references.

2 Morphosyntactic typology

Waray exhibits the typical morphological typology of GCP languages, with a high degree of morphological synthesis in verbal predicates, and a much lower degree of synthesis in referential expressions. Referential expressions (nouns and noun phrases) can be derived from multimorphemic verbs, but such morphological complexity is due to the verbal character of such nominalized forms rather than any specifically nominal categories. The following are some preliminary examples illustrating the morphological typology of Waray:

- (1) *Ini hi Nánay nagpípinamulod.*
 na-g-RED1~<in>pag-N-pulod
 DEM1 ABS.P Mom INTR.R-DEL-IPFV~<IT>INF-DIST-cut.wood
 ‘Mom went about cutting wood.’ (Alunan 2016: 72)

- (2) *Nagkapot~kapot kami han am’ mga kamot.*
 na-g-RED2~kapot
 INTR.R-DEL-ATTN~hold 1EXCL.ABS OBL 1EXCL.GEN PL hand
 ‘We playfully held hands.’

Note that in example (1) the verb form consists of a root and six morphological elements, including prefixes, partial reduplication, an infix, and a highly functional nasal element *N-* indicating distributive action. In contrast, the referential expression *ini hi Nánay* consists of three distinct morphological elements, two free words *ini* ‘this’ and *Nánay* ‘Mom’, and a proclitic case marking determiner *hi*. The verb form in (1) illustrates what we have found to be the maximum number of morphemes in a naturally occurring predicative word in the corpus, though more complex, yet grammatical, constructions can be concocted out of context. We find the verbal inflectional system to consist of twelve paradigmatic affixes (represented by *na-* ‘intransitive realis’ in examples 1–2). We have also documented thirteen productive and non-paradigmatic stem-forming (or loosely “derivational”) verbal elements, including all the other elements in examples (1) and (2) (Oyzon & Payne in preparation).

Example (2) illustrates another relatively synthetic verb containing a root and three morphological elements, including full root reduplication expressing what we call “attenuation.” The effect of full root reduplication [RED2] is that the event is less genuine, less serious or more random than the root alone would imply. The effect in the context from which this example is extracted is reasonably captured by the adverb “playfully” in the English translation. Example (2) also illustrates that even such a central category as nominal plurality (really collectivity) in a referential expression is expressed analytically in Waray, via the particle spelled *mga* (pronounced [máŋja]). It is safe to say that there are no morphologically expressed inflectional categories affecting nouns. All morphological complexity in referential expressions is stem-forming, and most of that is identical to verb morphology, nominalization being a central feature of Waray discourse.

Grammatical transitivity is an important dimension in Waray morphosyntax. Most inflected verbs are explicitly marked as being grammatically intransitive or transitive, as will be clear from the glosses of the inflected verbs appearing in this paper. A grammatically intransitive clause is one that contains an absolute argument expressing the most affected participant, but no separate controller or starting point. A grammatically transitive clause is one which contains a controller or starting point that is separate from the absolute argument. The separate controller or starting point is either expressed in the ergative case, or is strongly implied. This grammatical distinction is independent of the semantic (inherent or ontological) transitivity of the verb root. Semantically transitive roots (those that evoke scenes that imply the participation of an undergoer and a separate actor) may be expressed in grammatically transitive or intransitive constructions, depending on discourse-pragmatic considerations. This is the basis of the famous Philippine voice (or “focus”) systems. We will have no more to

say about this issue in this paper, but refer interested readers to the extensive literature on Philippine voice systems, most recently Payne & Oyzon (2020) and references cited therein.

The syntactic typology of Waray is broadly predicate-initial and prepositional. Clausal arguments or obliques may occur before the main predicate (an inflected verb or uninflected nominal predicate). There are three cases, absolutive, ergative/genitive and oblique. These are indicated via pronominal form (see Table 1), or prenominal determiners. In addition to case, the determiners distinguish personal names from all other nouns, and identifiability (comparable, though not identical to definite vs. indefinite). Oblique roles are divided between locative (determiner *ha*) and general (determiners *kan* ‘personal name,’ *han* ‘perpetual’ and *hin* ‘generic’). Justification for these terms, and extensive additional details of Waray morphosyntax are forthcoming in Oyzon & Payne (in preparation).

3 The personal pronoun system

Personal pronouns in Waray vary for case (absolutive, ergative/genitive, and oblique), person, and number. An inclusive vs. exclusive first-person plural distinction is also made. Table 1 displays the system of personal pronouns.

Table 1: Personal pronouns of Waray

Person	Absolutive		Ergative/Genitive			
	Enclitic	Full form	Enclitic	PoPFF ^a	PrPFF ^b	Oblique
1SG	–	<i>ako</i>	= <i>ko</i>	<i>nákon</i>	ákon	ákon/akô
1INCL	–	<i>kita</i>	= <i>ta</i>	<i>náton</i>	áton	áton/atô
1EXCL	–	<i>kami</i>	–	<i>námon</i>	ámon	ámon
Comp 1SG>2SG				= <i>ta ikaw</i>		
Comp 1SG>2PL				= <i>ta kamo</i>		
2SG	= <i>ka</i>	<i>ikaw</i>	= <i>mo</i>	<i>nímo</i>	ímo	ímo
2PL	–	<i>kamo</i>	–	<i>níyo</i>	íyo	íyo
3SG	–	<i>hiya/siya</i>	–	<i>níya</i>	íya	íya
3PL	–	<i>hira/sira</i>	–	<i>níra</i>	íra	íra

^aPost-posed full form

^bPre-posed full form

Note that when first-person singular acts on a second person, the enclitic form of the 1st person inclusive plural pronoun =ta occurs, rather than the expected =ko (3–4). This may be seen as a kind of actor-undergoer coreferentiality in that the speaker identifies with the undergoer when the undergoer is second person – as though the speaker is saying ‘We (including you) act on you’, for example:

- (3) *Isusumat ta ikaw kan Nánay.*
i-RED1~sumat
APPL2-IPFV~tell 1INC.ERG 2SG.ABS OBL.P Mom
'I will tell on you to Mom.' (Lit: 'We (including you) will tell on you to Mom.')
- (4) *Higugmaon ta kamo.*
higugma-on
love-TR.IR 1INC.ERG 2EXC.ABS
'I love you all.' (Lit. 'We (including you) love you all.')

This quasi coreferentiality is a common feature of Philippine pronoun systems. In some languages, the components of these sequences have merged to become distinct forms, though in Waray the two parts of each composite form are still pronounced as individual units.

Note also that there are two or three forms for each category in the genitive pronoun column – a preposed form, a postposed form, and for some categories an enclitic form. Example (5) illustrates the three alternative possessive constructions:

- (5) a. Enclitic genitive pronoun: *an balay ko* 'my house'
b. Preposed genitive pronoun: *an ákon balay* 'my house'
c. Postposed genitive pronoun: *an balay nákon* 'my house'

There are subtle semantic and/or pragmatic distinctions among these three possibilities. These nuances are relevant for the use of the reflexive nominal *kalugaríngon* as discussed in the following sections.

4 Basic reflexive constructions

Waray employs the noun *kalugaríngon* 'self' in many situations involving coreference between an actor and some other clause constituent. We consider *kalugaríngon* to be a noun, rather than a pronoun for the following reasons. First,

it does not vary morphologically for case, person or number the way pronouns do. Rather, its case is indicated via case-marking determiners, just as with nouns. Second, its person and number are indicated via adnominal genitive pronouns. Third, referring expressions headed by *kalugaríngon* may be modified like nouns in ways that pronouns may not. These properties will be illustrated in the following examples:

Examples (6–9) illustrate basic actor-undergoer coreferentiality expressed obligatorily with a reflexive construction:

- (6) *Nakità ko an ákon kalugaríngon ha salamin.*

na-kità

R.SPON-see 1SG.ERG ABS 1SG.GEN self LOC mirror

'I saw myself in a mirror.'

- (7) *Nasísina an akon sangkay ha íya kalugaríngon.*

na-RED1~sina

R.SPON-IPFV~hate ABS 1SG.GEN friend LOC 3SG.GEN self

'My friend hates (is angry with) himself.'

- (8) *Gindayaw níya an íya kalugaríngon.*

<in>g-dayaw

<TR.R>DEL-praise 3SG.ERG ABS 3SG.GEN self

'She praised herself'

- (9) *Ginpatay han tawo an íya kalugaríngon.*

<in>g-patay

<TR.R>DEL-kill ERG man ABS 3SG.GEN self

'The man killed himself'

Note that a prenominal genitive pronoun occurs before *kalugaríngon* in all of these examples. This is the dominant pattern for actor-undergoer coreferential reflexive constructions in Waray, and the first to come to mind when inventing examples out of context. Post-nominal and enclitic genitive pronouns are also grammatically possible, but far less common. Out of 323 examples of *kalugaríngon* in the corpus, all but one have an adnominal genitive possessor (ex. 43 below is the exception). Of the 322 examples of possessed *kalugaríngon*, there are five examples of enclitic genitives (see, e.g., examples 41–42 below), and no examples of post-posed genitive possessors (either pronominal or full NPs) of the reflexive nominal. In all the examples in this paper, *kalugaríngon* may be replaced by any

semantically compatible noun with no other changes in the sentence, e.g., ‘I saw my brother in a mirror’ (ex. 6), ‘she praised her teacher’ (ex. 8), etc. However, for possessed nominals other than *kalugaríngon*, enclitic and post-posed genitive possessors are proportionally more common than they are for *kalugaríngon*. Thus it appears there is an emerging special pattern of genitive possession for *kalugaríngon* that distinguishes it from other nouns. This may be an initial step toward grammaticalization of *kalugaríngon* as a dedicated reflexive pronoun.

Another nominal property of *kalugaríngon* is that it may be modified in the same way as other nouns. First, it takes the nominal collective marker *mga* to mark plurality, just as common nouns do: *áton mga kalugaríngon* ‘ourselves’ (see example 45 below). Second, certain attribute words may occur as attributive modifiers in NPs headed by *kalugaríngon* (10–11):

- (10) a. *an ákon minimingaw nga kalugaríngon*
ABS 1SG.GEN lonely LK self
‘my lonely self’
b. *an ákon nasísina nga kalugaríngon*
ABS 1SG.GEN angry LK self
‘my angry self’

None of the 323 examples of *kalugaríngon* found in the corpus for this study have adnominal attributive modifiers, so this phenomenon is clearly uncommon. However, the fact that it is even possible to modify this word distinguishes it from the class of pronouns.

The reflexive nominal *kalugaríngon* is a nominalized form based on the root *lugaring*, meaning roughly ‘self-rely’, or ‘on one’s own.’ Here are some examples of this root used outside of its common reflexive context:

- (11) *Naglúlugaring na ako.*
na-g-RED1~lugaring
INTR.R-DEL-IPFV~on.own now 1SG.ABS
‘I’m living on my own.’
- (12) *Paglugaring!*
pag-lugaring
INF-on.own
‘Do it yourself!’

Example (12) is a basic intransitive imperative construction employing the infinitive marker *pag-*. This utterance is a mild rebuke to someone, perhaps a child asking the speaker to do something for them.

The reflexive nominal is obligatory in an absolutive role (examples 6, 8 and 9 above) when coreferential with the actor of the clause. It is also obligatory when an oblique is coreferential with the actor, as in (7), and the following. In examples (13–14), if a simple [3SG] pronoun replaces the NP headed by *kalugaríngon*, coreference with the actor is impossible:

- (13) *Ginpadara* *níya* *an surat ha íya* *kalugaríngon.*
 <in>g-pa-dara
 <TR.R>DEL-CAUS-carry 3SG.ERG ABS letter LOC 3SG.GEN self
 ‘S/he sent the letter to her/himself’ (or ‘S/he had someone carry the letter to her/himself’).
- (14) *Nahuwad* *niya* *an kape ha íya* *kalugaríngon.*
 na-huwad
 R.SPON-spill 3SG.ERG ABS coffee LOC 3SG.GEN self
 ‘S/he spilled the coffee on her/himself’.

Note that the verb *huwad* in spontaneous mood is translated as ‘spill’ in English (example 14). The same root in deliberate mood, *ginhuwad*, would be more insightfully translated as ‘pour’.

The reflexive nominal does not naturally occur in an ergative role (15a) or in an absolutive role in an intransitive construction (15b):

- (15) a. * *Ginpatay* *han íya* *kalugaríngon an tawo.*
 <in>g-patay
 <TR.R>DEL-kill ERG 3SG.GEN self ABS man.
 (“Himself killed the man.”)
- b. * *Nagpatay* *an íya* *kalugaríngon hin* *táwo.*
 na-g-patay
 INTR.R-DEL-kill ABS 3SG.GEN self OBL.INDEF man
 (“Himself killed a man.”)

These constructions, if interpretable at all, are extremely awkward and confusing. In other words, the *actor*, whether ergative or absolutive, cannot reflect a distinct nominal in the clause or elsewhere. This is one property that Schachter (1977) called a “role-related subject property” of Tagalog.

However, an oblique nominal can reflect an actor argument whether the actor is ergative (examples 13–14 above) or absolutive in a detransitive (or “antipassive”, Oyzon & Payne in preparation) construction, as in (7) above, and the following:

- (16) *Nagpatay an tawo ha íya kalugáringon.*
na-g-patay
INTR.R-DEL-kill ABS man LOC 3SG.GEN self
'Humanity has killed itself' or 'The man killed himself'

Example (16) is a detransitive version of example (9), but the interpretation may be quite different. In (16) *an tawo* can be understood in the generic sense as "humanity." This is consistent with a general tendency for this particular word *tawo* to have a generic sense in certain contexts. This fact is tangential to the notion of reflexivity. It is not the case that all absolutive actors in detransitive reflexive constructions are understood as generic (see, e.g., example 7 above).

5 Contrast between introverted and extroverted verbs

Transitive verbs that allow a human object can be divided semantically into introverted and extroverted classes (Haiman 1980: 803). Prototypical extroverted actions express socially antagonistic events such as 'kill', 'kick', 'attack', 'hate' and 'criticize', whereas introverted actions include body care (or grooming) actions such as 'shave', 'comb' and 'bathe'. In Waray, extroverted actions are expressed with inherently transitive verbs, i.e., their underived forms may be used in a transitive frame. Introverted actions, on the other hand, tend to be expressed by inherently intransitive verbs. In an intransitive frame, such verbs tend to be understood as reflexive, even without use of the reflexive nominal. In order to occur in a transitive frame, such verbs require the addition of a valence increasing morphological element.

The examples in (17) and (23) (further below) illustrate extroverted verbs expressed in transitive and detransitive reflexive constructions, in what we are calling "deliberate" (prefix *g-*) and "controlled" (infix *-um-*) moods. Deliberate mood presents a situation as something that the actor goes out of their way to perform. The situation is not something the actor normally does, but is a special, conscious act. Controlled mood depicts situations as being under the control of the actor, but with emphasis on the *effect* of the situation on the absolutive argument (whether the absolutive happens to be the actor or not). Often, events in controlled mood are presented as situations the controller always, naturally, effortlessly or inevitably does. In the following examples, the transitive versions are understood as more harsh, more effective or more intense than the corresponding detransitive versions. Similarly, the deliberate mood detransitives are understood as more intense than the corresponding controlled mood forms:

- (17) a. Transitive, deliberate mood

Ginkagat han áyam an íya kalugaríngon.
 <in>g-kagat
 <TR.R>DEL-bite ERG dog ABS 3SG.GEN self
 'The dog bit itself.'

- b. Detransitive, deliberate mood

Nagkagat an áyam ha íya kalugaringon.
 na-g-kagat
 INTR.R-DEL-bite ABS dog LOC 3SG.GEN self
 'The dog nipped at itself.'

- c. Transitive, controlled mood

Kinagat han áyam an íya kalugaríngon.
 <in>-kagat
 TR.R-bite ERG dog ABS 3SG.GEN self
 'The dog bit/bites itself (as usual).'

- d. Detransitive, controlled mood

Kumágat an áyam ha íya kalugaríngon.
 <um>kagat
 <INTR.R.CTRL>bite ABS dog LOC 3SG.GEN self
 'The dog (casually) nips/nipped at itself.'

Many introverted verb roots are inherently intransitive, as evidenced by the fact that they may occur in transitive frames only with the addition of causative or applicative morphology (see Oyzon & Payne in preparation for a discussion of verb classes). For example, the root *karigò* 'bathe' may occur in a simple intransitive frame, as in the following:

- (18) a. Intransitive, controlled

Kumarigò an babáyi (?ha íya kalugaríngon)*
 <um>karigò
 <INTR.R.CTRL>bathe ABS woman LOC 3SG.GEN self
 'The woman bathed (herself).' (Expected, normal activity.)

- b. Intransitive, deliberate

Nagkarigò an babáyi (ha íya kalugaríngon)
 na-g-karigò
 INTR.R-DEL-bathe ABS woman LOC 3SG.GEN self
 'The woman bathed (herself).' (Unexpected in some way.)

Example (18a) illustrates an intransitive construction in controlled mood, implying that the event is unsurprising, effortless, normal, and fully expected. In this case, the addition of the reflexive nominal in an oblique role may be grammatical but sounds extremely odd (indicated by the double notation “*?”). Example (18b) depicts a similar scene, but in deliberate mood. This implies that the event is unusual, unexpected, effortful, or surprising in some way. In this case, without the reflexive nominal, coreferentiality is still the implication (‘she bathed herself’), but the clause is open to other interpretations, e.g., ‘she bathed (someone else, recoverable from the context).’ Still, the reflexive nominal in an oblique role forces a reflexive interpretation and the event is assumed to be unexpected for some other contextual reason. For example, the sentence becomes more interpretable with the addition of some context, such as *hin petrolyo* ‘with kerosene.’ Bathing oneself with kerosene would be a highly unusual activity, and hence would require the use of deliberate modality, and the explicit reflexive nominal.

As mentioned above, inherently intransitive introverted verbs may be expressed in a transitive frame with the addition of transitivizing morphology, such as the applicative suffix *-an*. In this case, the actor is expressed in the ergative case and the patient in the absolute. For the clause to express actor-undergoer coreference, the reflexive nominal is required as in (19).

- (19) Transitive, applicative

<i>Ginkarigoan</i>	<i>han babáyi</i>	<i>an</i>	<i>iya</i>	<i>kalugaríngon</i> .
<in>g-karigò-an				
<TR.R>DEL-bathe-APPL1	ERG woman ABS	3SG.GEN	self	
‘The woman bathed herself.’				

The detransitive version of this construction is not grammatical, since the applicative *-an* always derives a grammatically transitive stem. Rather, the intransitive forms without the applicative (examples in 18) serve the function of a de-transitive applicative.

Other verbs that follow this pattern are *ahit* ‘shave hair’ and *sudlay* ‘comb hair’. Here are some examples with *sudlay*:

- (20) a. *Nagsudlay* *hiya* (*han iya* *bungot*).
 na-g-sudlay
 INTR.R-DEL-comb 3SG.ABS OBL 3SG.GEN beard
 ‘He_i combed (his_{i/j} beard).’

- b. *Ginsudlayan han Barbero an íya bungot.*
 <in>g-sudlay-an
 <TR.R>DEL-comb-APPL ERG barber ABS 3SG.GEN beard
 'The barber_i combed his_{i/j} beard.'

The root *sudlay* does not naturally occur in the controlled mode: ??*sumudlay*. In example (20a), in the absence of a clarifying oblique, the actor's head hair is the usual interpretation of the undergoer. However, this assumption can be cancelled with the mention of another kind of hair, e.g., *bungot* 'beard', expressed as an oblique. Also, in (20b) the first impression is that the actor and the possessor of the beard are not coreferential – because that is a typical thing for barbers to do. Though, again, this is not necessary – the barber may be combing his own beard.

In all cases in which a possessor may or may not be coreferential with the actor of the clause, a coreferential meaning may be enforced by the use of *kalugaríngon* in a genitive role. This is fully grammatical, but unusual in discourse, since in fact the coreference relations are normally clear enough in actual conversation. As discussed further below, the reflexive nominal in a genitive role usually functions as a kind of self-intensifier (see, e.g., Haspelmath 2023 [this volume]), stressing the fact that the actor accomplishes the action on her or his own possession, and that this is unexpected for some reason:

- (21) a. *Nagsudlay hiya han íya kalugaríngon bungot.*
 na-g-sudlay
 INTR.R-DEL-comb 3SG.ABS OBL 3SG.GEN self beard
 'He_i combed his_i own beard.' (cf. 20a)
- b. *Ginsudlayan han Barbero an íya kalugaríngon bungot.*
 <in>g-sudlay-an
 <TR.R>DEL-comb-APPL ERG barber ABS 3SG.GEN self beard
 'The barber_i combed his_i own beard.' (cf. 20b)

In (21a–21b), *íya kalugaríngon* 'his self' is treated as a nominal possessor of 'beard', and *íya* must be coreferential with the actor of the clause. Compare (21a) to the following. In this case, *íya amay* 'her/his father' is the nominal possessor of *bungot*, and coreference between *íya* and the actor is the expected, but not necessary interpretation (22).

- (22) *Nagsudlay hiya han bungot han íya amay.*
 na-g-sudlay
 INTR.R-DEL-comb 3SG.ABS OBL beard OBL 3SG.GEN father
 'S/he_i combed her/his_{i/(j)} father's beard.'

Interestingly, the roots *suson* ‘criticize’ and *sina* ‘hate/be angry with’ fall into the grammatical class of introverted actions, though semantically they may be considered “socially antagonistic.” The basic, underived forms of these verbs are intransitive, and the transitive forms must be derived (23–24).

(23) Intransitive, controlled

- a. *Sumuson* *an politiko (ha íya kalugaríngon)*.
<um>suson
<INTR.R.CONTR>criticize ABS politician LOC 3SG.GEN self
‘The politician criticized himself.’ (Gently, self-reflecting)
- b. Intransitive, deliberate
Nagsusón *an politiko (ha íya kalugaríngon)*.
na-g-suson
INTR.R-DEL-criticize ABS politician LOC 3SG.GEN self
‘The politician criticized himself.’ (Deliberate, public.)
- c. Transitive, deliberate applicative
Ginsusnan *han politiko an íya kalugaríngon*.
<in>g-suson-an
<TR.R>DEL-criticize-APPL ERG politician ABS 3SG.GEN self
‘The politician criticized himself.’ (Mercilessly, harshly.)

(24) Intransitive, spontaneous

- a. *Nasísina* *hiya ha íya kalugaríngon*.
na-RED1~sina
R.SPON-IPFV~hate 3SG.ABS LOC 3SG.GEN self
‘He hates (is angry with) himself.’
- b. Transitive, deliberate
Ginsinahan *níya an íya kalugaríngon*.
<in>g-sina-an
<TR.R>DEL-hate-APPL1 3SG.ERG ABS 3SG.GEN self
‘He hated (or got angry with) himself.’

We speculate that these roots follow the pattern of introverted verbs because there is no physical effect on the criticized/hated person. The relevant semantic distinction in Waray seems to be between events that cause a physical change vs. those that do not, rather than strictly extroverted vs. introverted actions.

Here is an example of a verb that falls into the extroverted category, even though it does not describe a socially antagonistic act. It is more similar, semantically, to a grooming verb. In this case, however, the affected body part must be mentioned, probably because, unlike ‘comb’, there is no particular part of the body for which scratching is a normal, everyday activity:

- (25) *Ginkalot níya an íya (kalugaríngon) likod.*
 <in>g-kalot
 <TR.R>DEL-scratch 3SG.ERG ABS 3SG.GEN self back
 ‘S/he scratched her/his (own) back.’

Without *kalugaríngon*, example (25) is ambiguous as to whether the possessor of the back is coreferential with the actor. With *kalugaríngon*, the reflexive interpretation is enforced. Although the effect of scratching may or may not be visible, it does involve physical rather than solely psychological effects. We speculate that it is for this reason that *kalot* ‘scratch’ falls into the class of “extroverted” (or physical effect) verbs.

6 Coreference between non-actor arguments

The reflexive nominal may be used to enforce coreference between non-actor arguments. For example:

- (26) *Ginsumatan kami níya bahin han ámon*
 <in>g-sumat-an
 <TR.R>DEL-tell-APPL 1EXCL.ABS 3SG.ERG about OBL 1EXCL.GEN
kalugaríngon.
 self
 ‘He told us about ourselves.’

When the target and its reflection are both non-actors and first or second person, as in (26) and (28), the reflexive nominal is possible, but not necessary. Examples (26–27) are nearly synonymous. (26) simply emphasizes the importance of the coreference relation (similar to the self-intensifying function described above for *kalugaríngon* in a genitive role):

- (27) *Ginsumatan kami níya bahin ha ámon.*
 <in>g-sumat-an
 <TR.R>DEL-tell-APPL 1EXCL.ABS 3SG.ERG about OBL 1EXCL.OBL
 ‘He told us about us.’

- (28) *Ginpakità* *ta¹* *ikaw* *han imo* *ladawan.*
 <in>g-pa-kità
 <TR.R>DEL-CAUS-see 1INC.ERG 2SG.ABS OBL 2SG.GEN picture
 'I showed you a picture of you.' (or 'your picture')

However, when the actor and the non-actor nominal are third person and the same number, there is no non-paraphrastic way to disambiguate. The examples in (29) are ambiguous with or without the presence of the reflexive nominal:

- (29) a. Transitive:
Ginpakità *ni* *Juan hi* *Maria hin íya*
 <in>g-pa-kità
 <TR.R>DEL-CAUS-see ERG.P John ABS.P Mary OBL 3SG.GEN
kalugaríngon ladawan.
- self picture
 'John showed Mary a picture of him/herself.'
- b. Detransitive:
Nagpokità *hi* *Juan kan* *Maria hin íya*
 na-g-pa-kità
 INTR.R-DEL-CAUS-see ABS.P John OBL.P Mary OBL 3SG.GEN
kalugaríngon ladawan.
- self picture
 'John showed Mary a picture of him/herself.'

Without *kalugaríngon*, (29a–29b) would be triply ambiguous. The picture could be of John, of Mary, or of some other 3rd person singular referent. It should be emphasized that this type of construction, though completely grammatical, is rare in conversation. In face-to-face discourse, coreference relations are usually clear from the context. This optional use of *kalugaríngon* may be seen as a kind of self-intensifying function, emphasizing the coreference relationship, or contrasting coreference with a presumption of disjoint reference.

¹Recall that *ta ikaw* and *ta kamo* are 'composite' forms used whenever a first person participant acts on a second person participant. While =*ta* is an inclusive plural (1st + 2nd person) form, it always stands for first person singular when the absolutive is second person.

7 Contrast between exact and inclusive coreference

There is no essential contrast between reflexive constructions involving exact vs. inclusive coreference. The expression *ngan iba* ‘and others’ can simply be added to the reflected referential expression to indicate others are included with the referent of the reflexive nominal (30).

- (30) *Dinádayaw níya an íya kalugaríngon ngan an iba.*
 <in>RED1~dayaw
 <TR.R.CTRL>IPFV~praise 3SG.ERG ABS 3SG.GEN self and ABS other
 ‘He praises himself and others.’

This strategy seems to be available for any construction involving *kalugaríngon*.

8 Long-distance coreference

In long distance co-reference, the reflexive nominal may be used to enforce coreference relations:

- (31) *Húnahúna ni Pedro may adâ an íya kalugaríngon igo nga kwarta.*
 think ERG.P Pedro EXIST ABS 3SG.GEN self enough LK
 money
 ‘Pedro thinks that he himself has enough money.’

The construction in (31), though grammatical, is unusual in actual conversation. Normally a simple [3SG.ABS] pronoun would imply, though not strictly coreference in situations like (32).

- (32) *Húnahúna ni Pedro may adâ hiya igo nga kwarta.*
 think ERG.P Pedro EXIST 3SG.ABS enough LK money
 ‘Pedro_i thinks that he_{i(j)} has enough money.’

Again, this (rather uncommon) usage of *kalugaríngon* may be seen as a kind of self-intensifying usage. However, unlike self-intensifiers in European languages (e.g., Latin *ipse*, German *selbst*, or Spanish *mismo/misma*), *kalugaríngon* is syntactically constrained – it may not appear as an appositive (33a–33b), or in an actor role (see ex. 15 above).

- (33) Spanish: *Viene la reina misma.*
German: *Die Königin selbst kommt.*
Latin: *Regina ipsa ventura est.*
English: *The queen herself is coming.*

a. Waray:
**Makanhi (íya) kalugaríngon an reyna.*
coming 3SG.GEN self ABS queen

b. **Nagkúkuha (íya) kalugaríngon han reyna an tinapay.*
getting 3SG.GEN self ERG queen ABS bread
(for ‘The queen herself is getting the bread.’)

Such self-intensifying functions are available in Waray using the Spanish borrowing *mismo*, though this usage is not particularly common. See (34).

- (34) *Makanhi mismo an reyna.*
Makanhi an reyna mismo.
‘The queen herself is coming.’

Of the 256 examples of *mismo* in the corpus, there are none that clearly exhibit this usage. Furthermore, *mismo* never functions as a reflexivizer, (35).

- (35) **Ginpatay han tawo an íya mismo.* (cf. 9)
(for: ‘The man killed himself.’)

9 Speculations regarding the awkwardness of *kalugaríngon* constructions in Waray

As mentioned in the introduction, we find it surprising that the reflexive form, *kalugaríngon*, is such a phonologically large and morphologically complex nominal. Most languages, it seems, have well structuralized and phonologically reduced patterns for expressing reflexive ideas. One may especially expect languages with highly synthetic verb morphology, such as Waray, to have some verb or verb-phrase element that expresses at least some varieties of reflexivity. Indeed, the verb morphology of Waray offers many ways of adjusting the argument relations and event type expressed by a clause, including causative, applicative (two types), reciprocal, precative, associative (one action done together with others), distributive associative (multiple actions done randomly with others), distributive (action done randomly), counter expectation, imperfective, iterative,

attenuative, and others. One finds it surprising, in this context, that reflexivity should be a category that is not also well grammaticalized. Instead, we find a rather cumbersome and often awkward full nominal expression.

Our speculation on this topic is grounded in the observation that Philippine cultures, Waray in particular, are very communal societies. Acting together with others is a high cultural value. Consequently, it is often unusual, and rather aberrant that someone should act exclusively on one's own, or upon oneself. This fact is expressed grammatically in the multiplicity of associative, mutual action and reciprocal categories in the verb, and in the inclusive/exclusive distinction in the pronoun system. The colloquial expression *paglugaring!* 'Do it on your own' or 'don't involve me/us with what you are doing' is an indicative example. This expression (based on the root *lugaring*), is used as a rebuke to somewhat ostracize somebody from a group. This is because in Waray, traditionally things are done collectively.

For another example, in traditional contexts drinking *tubâ* 'coconut wine' is a social activity. Waray even has the following lexicalized expression employing the associative infix *-Vr-*, as in (36).

- (36) *irignom*
 <Vr>g-inom
 <ASSOC>DEL-drink
 'drinking session'

Traditionally there is one *tagayan*, a cup that is passed from person to person in a drinking session. Warays never drink alcohol alone. So, to do things alone, especially social activities, is odd, and a serious breach of social norms. We consider these observations to be speculation, since one must be careful not to jump too quickly from cultural observations to linguistic analyses. In this case, however, we find the speculation particularly intriguing, and perhaps worthy of serious future research.

10 The use of *kalugaringon* in discourse

In a corpus of 1,753,050 words (3NS Corpora project 2022), we find 323 examples of *kalugaringon*, or 0.08% of the total number of words. It is the 268th most common word in the corpus. For comparison, there are 117,231 examples of standard reflexive pronouns in the British National Corpus (Davies 2004), advertised to contain "100 million words". Thus approximately 0.11% of the advertised total number of words in the English corpus are reflexive pronouns. Furthermore, we

did not include possessors with *own* in our search of the BNC, even though *kalugaríngon* is used this way in Waray. From this we can conclude that reflexive constructions with *kalugaríngon* are proportionally less common than similar large reflexives in English. Whether this difference is significant or not we will leave to the statisticians.

The following are a few naturally occurring examples of *kalugaríngon* from the corpus, with some observations concerning its usages. We include these examples to balance the examples earlier in the paper, most of which are devised by speakers specifically in response to the questionnaire by Janic & Haspelmath 2023 [this volume]. The out-of-context examples are fully grammatical, but apart from a discourse context, it is often unclear why a speaker would choose to use *kalugaríngon* or not.

10.1 *Kalugaríngon* as an absolute nominal

Examples (37–39) are examples of reflexive constructions in which the reflexive nominal is obligatory. In these examples, the reflexive nominal is in the absolute case, and its antecedent, the second-position enclitic pronoun =*ko*, is in the ergative:

- (37) *Di' ko man puyde ig-stress tak'*
 dili i-g-stress iton-ákon
 NEG 1SG.ERG SO can APPL2-DEL-stress DEM1.ABS-1SG.GEN
kalugaríngon ha iyo.
- self LOC 2SG.OBL
 ‘I cannot stress myself for you.’
- (38) *Ginpakamatyan ko na hin tawâ an ak'*
 <in>g-pag-ka-matay-an ákon
 <TR.R>DEL-INF-VBLZR-kill-APPL1 1SG.ERG COMPL OBL laugh ABS 1SG.GEN
kalugaríngon.
- self
 ‘I killed myself with laughter.’
- (39) *Nag-newyear resolution man gud ak' nga pupugson*
 na-g-new.year so indeed 1SG.ABS LK IPFV-force~TR.R
 INTR.R-new.year resolution

<i>ko</i>	<i>tak'</i>	<i>kalugaríngon magsurat</i>	<i>hin</i>
		<i>iton-ákon</i>	<i>ma-g-surat</i>
1SG.ERG	DEM1.ABS-1SG.GEN	<i>self</i>	INTR.IR-DEL-write OBL.INDEF
<i>bisan ano kada búlan.</i>			

about what every month

'I made a new year resolution that I will force myself to write about something every month.'

In examples (37) and (39), the form *tak'* is a blend and contraction of the demonstrative *iton* plus the pronoun *ákon*.

10.2 *Kalugaríngon* as a genitive modifier

All examples of *kalugaríngon* functioning as a genitive modifier that occur in the corpus express intensification of the coreference relation (or self-intensification). In example (40), *áton kalugaríngon* 'our self' is a genitive modifier within the noun phrase *an áton kalugaríngon nga dila*, 'our own tongue,' literally 'our self's tongue'. The absolute case determiner, *an*, specifies the head, *dila*, and not *kalugaríngon*.

- (40) *Yana nga may MTBMLE na kita gin-aaghat*
<in>g-RED1~aghat
 now LK EXIST MTBMLE COMPL 1INCL.ABS <TR.R>DEL-IPFV~encourage
an mga manunurat an mga Waraynon nga
ma-g-RED1~N-surat waray-non
 ABS PL INR.R-DEL-IPFV~PLC-write ABS PL Waray-PERSON.NOM LK
gamiton an áton kalugaríngon nga dila ha kada adlaw nga
gamit-on
 use-NMLZ ABS 1PLINC.GEN self LK tongue in every day LK
pakigkaharampang ngan pakig-istorya ngan pati na
pag-ki-g-<Vr>kahampang pag-ki-g-istorya
 INF-PREC-DEL-PLC-socialize and INF-PREC-DEL-speak and even COMPL
ha panutdoan hin áton mga eskwelahan
pag-N-tutdo-an eskwela-an
 LOC INF-PLC-teach-NMLZ LOC 1PLINC PL education-LOC.NOM
 'Now that we have MTBMLE, the writers, the Waray are encouraged to use our own tongue in our everyday socializing, conversation and even in teaching in our school.'

This usage of *kalugaríngon* is technically redundant, since *an áton dila* ‘our tongue’ would have been perfectly clear. However, its usage here emphasizes the fact that the language referred to is *our own*, i.e., something that belongs to us. In a technical sense, this example also involves “long distance” reflexivization, since the antecedent for *ákon kalugaríngon* is in the previous clause, *yana nga may mtbmle na kita* ... ‘Now that we have MTBMLE² ...’ However, this use of *kalugaríngon* is more intensive than reflexive/coreferential. The speaker is stressing that writers are using Waray, as opposed to the other languages that Waray writers usually employ.

Example (41) also illustrates *kalugaríngon* functioning as a self-intensifying genitive modifier within an NP. Again, this usage is technically redundant – *an akon kahímo nga dugúan* ‘my bloody face’ would have been perfectly clear.

- (41) *Nasiplatan* *ko* *an kalugaríngon ko* *nga kahímo*
na-siplat-an
R.SPON-stare-APPL 1SG.ERG ABS self 1SG.ERG LK face
dugúan, *buklad* *an mata, laylay* *an dila, luho an*
dugô-an
blood-NMLZ.LOC wide.open ABS eye hang.flaccidly ABS tongue hole ABS
agtang.

forehead

'I stared at my own bloody face, eyes wide open, tongue hanging flaccidly, forehead pierced.'

Example (42) also illustrates *kalugaríngon* as a self-intensifying genitive modifier.

²Mother-Tongue Based Multi-Lingual Education

‘What you will hear is like the whispering of the ripe rice, if not the call of different animals and birds, if not your own breathing.’

Once again, the use of *kalugaríngon* is technically redundant, since *an paggin-hawa mo* ‘your breathing’ would have been perfectly clear.

10.3 *Kalugaríngon* in an oblique role

Example (43) is one of the few examples in the corpus in which *kalugaríngon* appears with no possessor. Normally one would expect either the prenominal *ákon* (as in example 44), or the post-nominal enclitic =*ko* [1SG.GEN] in this construction. However, it is a general characteristic of Waray discourse that first person forms may be omitted when the speaker's intention is clear. Therefore, one might say there is a "zero" possessor of *kalugaríngon* in this example. In this case, the reflexive nominal is required in order to express coreference between the actor and the oblique nominal.

³This example is from the Northern Samar variety of Waray. This is evident by the use of *san* as the genitive case particle, in place of *han* as used in Leyte. Also, this lexical item, *mao*, is characteristic of Calbayog City and Northern Samar. The form in Leyte is *ámo* or, *asya*.

banyaga nga dila an nahigaraan.
na-higara-an
stranger LK tongue ABS R.SPON-accustom-APPL1

'I was able to pull off my sudden emceeing, though the embarrassment with myself still lingers, that even though I am a true Waray, I am used to a foreign tongue.'

Once again, the use of *kalugaríngon* in example (45) is technically not necessary, since the actor and the coreferential NP are 1st person inclusive. However, in this case it intensifies the seriousness, or challenging connotations of the rhetorical question that follows.

- (45) *Igpakiana ta ini ha áton mga kalugaríngon:*
i-g-pakiana
APPL2-DEL-ask 1PLINC.ERG DEM1.ABS LOC 1PLINC.GEN PL self
ginpoprotektahan ta ba an áton
<in>g-RED1~protekta-an
<TR.R>DEL-IPFV~protect-APPL1 1PLINC.ERG QP ABS 1PLINC.GEN
kalibúngan?
ka-libong-an
NMLZ-surroundings-LOC.NOM
'Let us ask this of ourselves: Are we protecting our environment?'

10.4 Long distance coreference

In example (46) *kalugaríngon* occurs in a nominalized (or "headless relative") clause, inside an adverbial clause following the subordinating conjunction *kay* 'because'. Its antecedent occurs in the main clause, *grabe nga mga tawo*. However, the ergative argument of the nominalized clause is "zero" (indicated by parenthetical "they" in the English translation) under coreference with the absolute of the main clause. In this case, *kalugaríngon* is necessary to express coreferentiality. Without *kalugaríngon*, the sentence would imply that extreme people consider them (some other group) to be gods.

- (46) *Grabe nga mga tawo makaharadlok kay (an)⁴ mga*
 ma-ka<Vr>hadlok
 extreme LK PL person STV-VBLZR-ASSOC-afraid because ABS PL
 kalugaríngon an ginkikilala na nga diyos.
 g<in>RED1~kilala
 self ABS DEL<TR.R>IPFV~recognize COMPL LK god.
 'Extreme people are frightening because (they) are ones who consider themselves as god.'

11 Conclusions

In summary, we find that reflexive constructions in Waray are expressed mostly via an analytic strategy involving the reflexive nominal *kalugaríngon*, ‘self’. For certain “grooming” activities, actor-undergoer coreference may be expressed in a simple intransitive construction, but this is not common. We call *kalugaríngon* a nominal (or noun) rather than a pronoun because it has almost all properties of ordinary full nouns: it follows a prenominal case marker/determiner, and its person and number are expressed via free possessive pronouns. Also, it may be marked for plurality and modified in the same way nouns can. Pronouns, on the other hand, vary morphologically for case and person/number, and may not take “adpronominal” modifiers. The only respect in which *kalugaríngon* departs from prototypical nounhood is that it may not easily express the semantic role of actor, e.g., the Waray equivalents of “*Herself saw Mary”, and “*Himself sat down” are as ungrammatical as these English strings. This fact is the basis for one of the “role related subject properties” discussed by Schachter (1977) for Tagalog.

Kalugaríngon may occur in any case, except ergative, as mentioned above. It may also reflect antecedents in any case, including obliques and genitives. The function of *kalugaríngon* in a genitive role almost always intensifies, rather than simply codes a coreference relation. Antecedents in main clauses may also be reflected by *kalugaríngon* in subsequent complement, relative or adverbial clauses, but again, such usages are usually intensive, rather than simply reflexive.

Despite this high degree of flexibility, we find the use of *kalugaríngon* to be proportionally less common in our corpus than are English reflexive pronouns in the British National Corpus. We speculate that this pattern may be due to one or both of two factors: 1. *Kalugaríngon* is a rather cumbersome, often awkward locution. It has not developed a “streamlined” grammaticalized form as one often finds for reflexive constructions in the world’s languages. 2. Since Waray traditional culture is very communal and cooperative, self-action is somewhat

socially stigmatized. It is often a mark of ostracism and/or disdain for someone to do something “by oneself”, “to oneself,” or “for oneself.” Future research may reveal additional insights in this direction.

Formatting conventions

Data in this paper are presented in an interlinear format. The top line is the official Waray orthography, as described in Nolasco et al. (2012), revision currently under consideration by the Department of Education. A second line provides morphological analyses when helpful for the point illustrated by the example. A third line gives the morpheme-by-morpheme glosses. Finally, the last line gives a free English translation.

In the current official orthography, syllable prominence (either word stress, vowel length, or both) is not indicated when it is predictable. When it is unpredictable given the context, an acute accent indicates syllable prominence. Briefly, if the final syllable is prominent, no accent is needed. If there is a “heavy” syllable (CVC, or CV:) anywhere in the word other than the last syllable, the prominence predictably moves to the left, and so is not indicated. All other prominent syllables in indigenous Waray words are indicated with an acute accent. In Spanish and English loan words, stress is not indicated at all. Syllable prominence alone may distinguish lexical items. In addition, many grammatical categories are expressed or accompanied by changes in syllable prominence patterns. The glottal stop is indicated in one of four ways.

- 1) Sequences of vowel graphemes always involve an intervening glottal stop, e.g., *til* [ti'ʔil], ‘foot’.
- 2) Following a consonant, the glottal stop is indicated with a hyphen, e.g. *magáanak* [mag'ʔa?anak] ‘will give birth’.
- 3) At the end of a word in a prominent syllable, it is indicated with a circumflex over the final vowel, e.g., *kitâ* [ki'ta?] ‘to see’.
- 4) At the end of a word in a non-prominent syllable, it is indicated with a grave accent over the final vowel, e.g., *sikò* ['siko?] ‘elbow’. In such cases the penultimate syllable is predictably prominent. Unfortunately, most published material in Waray does not employ diacritics at all.

In this paper, morphological analyses are expressed in the following ways. Prefixes are followed by a hyphen, e.g., *g-*, *pa-*; suffixes are preceded by a hyphen, e.g., *-an*, *-i*: Inflectional forms are surrounded by angled brackets e.g., *<in>*, *<um>*.

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Abbreviations

Note that default features are omitted simply to save space. For example, the determiner *an* is glossed simply as [ABS] ‘absolutive’, though technically it should be [ABS.DEF.NONP] ‘absolutive, definite/identifiable, non-personal name.’ It contrasts with *it*, glossed [ABS.INDEF] ‘absolutive, indefinite/non-identifiable, non-personal name’ and *hi* glossed [ABS.P] ‘absolutive, personal name’.

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ABS	absolutive case	DIST	distributive (e.g., DIST.PLUR)
APPL1	applicative 1 (locative or recipient applicative, - <i>an</i>)	EXIST	existential phrase (<i>may adâ</i>)
APPL2	applicative 2 (benefactive or transferred item applicative, <i>i-</i>)	INDEF	indefinite/non-identifiable
CTRL	controlled mood	LK	linker
COMPL	completive particle	P	personal name
DEF	definite/identifiable	PLUR	pluraction
DEL	deliberate mood	QP	question particle
DEM1	demonstrative pronoun/adjective, near speaker and hearer.	R	realis mood
DEM2	demonstrative pronoun/adjective, near hearer, away from speaker.	RED1	partial (# CV-) reduplication
		RED2	full root reduplication
		SPON	spontaneous mood
		STV	stative
		VBLZR	verbalizer

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Part V

Australia

Chapter 20

The reflexive voice construction in Anindilyakwa

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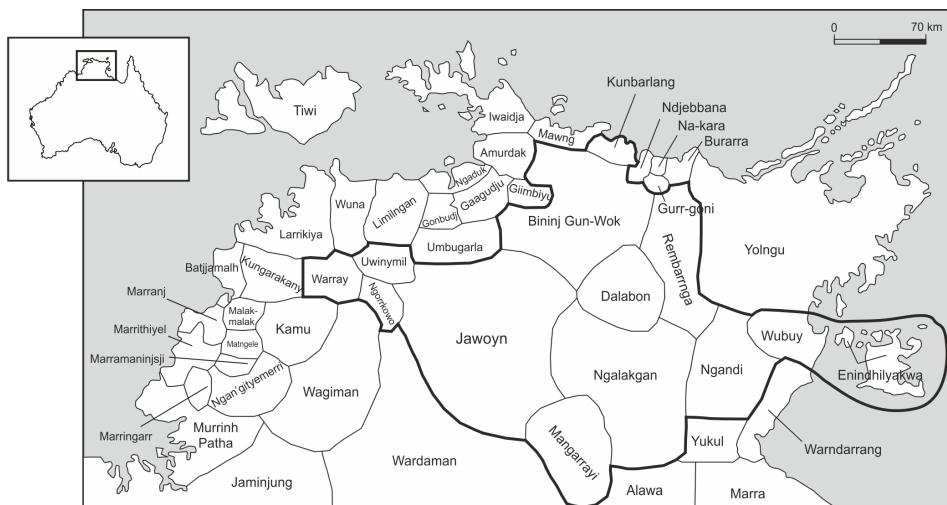
This chapter describes the reflexive voice in Anindilyakwa, a polysynthetic language of Northern Australia. In this language, up to two arguments of a verb are identified by means of pronominal prefixes on the verb. Reflexive voice in Anindilyakwa is marked by a verbal suffix that occurs on transitive verbs and reduces the valency of the verb by one. The suffix signals that the agent subject is co-referential with the referent that previously occurred as the transitive object pronominal prefix. This is mostly a patient referent, but it can also be a beneficiary introduced by the benefactive applicative, or the recipient referent of an inherently ditransitive verb. Although the language has free pronouns, there are no reflexive pronouns in Anindilyakwa; the sole reflexivizer is the verbal suffix.

1 Introduction

Anindilyakwa (pronounced [ənɪ̯ntiʎakʷa] in the language itself) is a non-Pama-Nyungan language spoken by over 1,400 people (Marmion et al. 2014) living on Groote Eylandt and Bickerton Island in the Gulf of Carpentaria, Northern Territory, Australia (see Figure 1). It is one of the very few remaining Australian languages that is still acquired by children and is thus spoken by all generations. Nonetheless, despite the efforts of the community and linguists, the language is, as are all of Australia's indigenous languages, endangered due to the pressure of English. Anindilyakwa was once thought to be "perhaps the most difficult of all Australian languages, with a very complex grammar" (Dixon 1980: 84), and classified as a language isolate by O'Grady, Voegelin, et al. (1966), O'Grady, Wurm, et al.



(1966), and Evans (2005: 250). However, the language has recently been demonstrated to be closely related to Wubuy, its nearest geographical neighbour spoken on the mainland and is thus to be subsumed under the Gunwinyguan family (van Egmond 2012; van Egmond & Baker 2020; see Figure 1). The previously presumed isolate status of Anindilyakwa may be due to: (i) its unusual phonological inventory, which departs from both the typical Australian pattern (including e.g. the phoneme /ə/), and from the typical Gunwinyguan pattern (due to e.g. the lamino-dental /l/ and lamino-palatal /ʎ/ phonemes, written *lh* and *ly*, respectively), (ii) its few recognizable verbal roots and inflections (Baker 2004, fn 25), and (iii) its idiosyncratic lexicon (Capell 1942: 376; Worsley 1954: 20; Heath 1981; Yallop 1982: 40). But despite its complexities, van Egmond (2012) shows that Anindilyakwa grammar is also fairly regular, and patterns much like the Gunwinyguan family of languages on the mainland to its west.



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Figure 1: Anindilyakwa and the Gunwinyguan family, based on Harvey (2003: 204), Alpher et al. (2003), van Egmond (2012), Evans (2017), van Egmond & Baker (2020)

Like the other Gunwinyguan languages, Anindilyakwa is richly polysynthetic, exhibiting extensive cross-referencing of subject and object arguments on the verb by means of pronominal prefixes, noun incorporation, and a variety of valency-changing affixes, including the reflexive suffix that is the topic of this chapter. All nominals and verbs are obligatorily inflected for person, number and gender for humans, or one of five noun classes for non-humans.

The sole reflexivizer in the language is a verbal reflexive voice marker, which is a suffix that is added to the verb stem. There are no reflexive pronouns in Anindilyakwa. The reflexive suffix changes the argument structure of the verb: since the agent subject is now co-referential with the patient argument in object function, the verb becomes morphologically intransitive, and both agent and patient are represented by the same pronominal prefix on the verb. The reflexive suffix *-jungwV-* is related to the reciprocal suffix *-yi-*, which occurs in the same position and which also reduces the valency of the verb. Compare the transitive verb ‘kill’ (literally ‘make die’) in (1a) with the intransitive reflexive (1b) and reciprocal (1c) verbs:

- (1) a. *nə-ma-jungwa-ju-wa*
3SG.M-VEG-die-CAUS-PST
'he killed it (e.g. animal of VEG noun class, such as *mangma*
'VEG.crab')
- b. *nə-jungwa-ja-jungu-na*
3SG.M-die-CAUS-REFL-PST
'he killed himself'
- c. *na-jungwa-jee-yi-na*
3PL-die-CAUS-RECP-PST
'they killed each other'

In (1a), the verb has a subject prefix *nə-* and an object prefix *ma-* representing the agent ('he') and the patient (an animal of vegetable [VEG] noun class, such as a crab), respectively. The reflexive verb in (1b), on the other hand, is intransitive and the pronominal prefix *nə-* represents both agent and patient, which are co-referential. Similarly, the verb in (1c) is also intransitive whilst specifying that the subject and object are co-referential, with the added reciprocal meaning of two or more agents each engaging in the same action (i.e. ‘to verb each other’).

After a brief overview of the principal typological features of the language (§2.1), nominals (§2.2), verbs (§2.3), the reflexive voice construction is described in detail in §3, followed by its potential historical source in §4, and a brief summary of the reflexive voice construction in §5.

2 Typological features

2.1 Introduction

The principal morphosyntactic typological features of Anindilyakwa are:

- As expected for a polysynthetic language, a single verb can express much of what is accomplished by the syntax in other languages – expression of arguments, causativization, reflexivization, reciprocity, and subordination.
- Arguments of the verb can be additionally expressed by optional free pronouns, demonstratives, or full nominals.
- Up to two arguments are prefixed to the verb (§2.3), and nominals are classified for one of five noun classes (non-humans) or one of three genders (humans) (§2.2).
- Four distinct series of pronominal prefixes on verbs encode an equal number of moods.
- Case-marking is primarily exploited as a strategy for roles such as locative, ablative, allative, instrumental, and to indicate relations between nominals. Anindilyakwa makes little use of nominal morphology to encode information about core syntactic functions; determination of subject (intransitive and transitive) and object functions is done by the pronominal prefixes on the verb.
- Most nominal case suffixes can also be used as complementizing cases on a verb in a subordinate clause to express temporal, causal and other relationships with the main clause (see examples in 7 below).
- A number of derivational affixes can alter the argument structure of the verb: the benefactive applicative prefix *mən-* turns a beneficiary participant into an object that is prefixed to the verb, and the reciprocal and causative suffixes change the valency of the verb (§2.3.3), as does the reflexive suffix (§3).
- Body part and generic nominals can be incorporated into verbs and adjectives, leaving the valency of the verb unaffected; the incorporable syntactic functions are restricted to the absolute pattern (e.g. example 2b below)
- Verb stems can be complex, historically consisting of an uninflecting plus an inflecting element, the latter determining the conjugational class of the stem.
- Since the arguments of the verb are identified by the pronominal prefixes on the verb, word order is syntactically free, and pragmatically determined.

- All words end in [a], and the vowel [u] is not contrastive but generated by adjacent [+round] consonants. The first [u] in the reflexive suffix *-jungwV-*, for instance, is formed by assimilation of an underlying high vowel to the following labio-velar [ŋʷ]. The second vowel is realised as [a] when word-final (*-jungwa*), but when followed by another suffix, this vowel absorbs the rounding of the preceding [ŋʷ] and is realised as [u] (e.g. *-jungu-na*).

The following examples illustrate some of the above features: the pronominal prefixes on verbs and noun classes on nominals in (2a-2c), noun incorporation in (2b) and derivational affixes in (2c). All examples in this chapter come from van Egmond (2012) unless indicated otherwise.

- (2) a. *ngayuwa yiba-rrəngkə-na-ma nungkuwa adhalyəmə-manja*
 1SG.PRO IRR.1SG/2SG-see-NPST-1.FOC 2SG.PRO NEUT.river-LOC
 arnungkwaya
 tomorrow
 'I will see you at the river tomorrow'
- b. *nanga-lyang-barra arəngkə-manja akina-mərra*
 FEM/FEM-head-hit.PST NEUT.head-LOC NEUT.that-INS
 dhukururrku-manja
 FEM.Brolga-LOC
 'she [Emu(FEM)] hit Brolga on the head with that [stick(NEUT)]'
 (Leeding 1989: 310)
- c. *kərrenə-mənə-muku+lharri-ju-wa merra*
 3M/2PL-BEN-fluid+fall-CAUS-PST VEG.blood
 'he shed his blood for you'

As is common in Australian languages (e.g. Dixon 1980), two major word classes can be identified in Anindilyakwa along the traditional lines of the affixational potential of the individual lexemes: nominals (§2.2) and verbs (§2.3). These two classes are differentiated by taking distinct sets of inflectional and derivational affixes.

2.2 Nominals, noun classes and genders

All nominals apart from loanwords are obligatorily inflected for person, number and gender (humans), or noun class (non-humans). Noun class systems are very common in the non-Pama-Nyungan languages of Australia. They are grammaticalized agreement systems, where class may be overtly marked on the noun, on

articles and modifiers within the noun phrase, and on the predicate (e.g. Dixon 1986; Sands 1995; Aikhenvald 2000). The most typical Australian system has four noun classes, which can be broadly labelled as masculine, feminine, vegetable, and neuter or residual (e.g. Sands 1995: 258; Evans 2003: 182). Anindilyakwa has five noun classes that classify non-humans and three genders that classify humans and domesticated animals, as outlined in Tables tab:vanegmond:1 and 2. The pronominal prefixes (1st and 2nd person) are identical on nominals and intransitive verbs, whereas the gender and noun class prefixes (3rd person) differ. The table also lists the free pronouns for completeness.

Table 1: Anindilyakwa free pronouns and prefixes on nominals and intransitive verbs – humans and domesticated animals

	Gloss	Nominals	Intransitive verbs	Free pronouns
Pronominal prefixes	1	<i>nəng-</i>	<i>nəng-</i>	<i>ngayuwa</i>
	1PL	<i>yirr-</i>	<i>yirr-</i>	<i>yirruwa</i>
	1FDU	<i>yirrəng-</i>	<i>yirrəng-</i>	<i>yirrənguwa</i>
	1MDU	<i>yin-</i>	<i>yin-</i>	<i>yinuwa</i>
	12	<i>y-</i>	<i>y-</i>	<i>yakuwa</i>
	12PL	<i>ngarr-</i>	<i>ngarr-</i>	<i>ngakurruwa</i>
	2	<i>nəngk-</i>	<i>nəngk-</i>	<i>nəngkuwa</i>
	2PL	<i>kərr-</i>	<i>kərr-</i>	<i>nəngkurruwa</i>
	2FDU	<i>kərrəng-</i>	<i>kərrəng-</i>	<i>nəngkərrənguwa</i>
	2MDU	<i>kən-</i>	<i>kən-</i>	<i>nəngkə(r)nuwa</i>
Genders	3F	<i>dh-</i>	<i>ying-</i>	<i>ngalhuwa</i>
	3M	<i>n-</i>	<i>n-</i>	<i>enuwa</i>
	3PL	<i>wurr-</i>	<i>na- ~ nuw-</i>	<i>abərruwa</i>
	3FDU	<i>wurrəng-</i>	<i>narrəng-</i>	<i>abərrənguwa</i>
	3MDU	<i>wun-</i>	<i>nen-</i>	<i>abə(r)nuwa</i>

One way in which Anindilyakwa stands out from all other Gunwinyguan (and, indeed, non-Pama-Nyungan) languages is that the class prefixes on nouns are completely lexicalized and tightly bound to the noun root.¹

¹In other Gunwinyguan languages, noun class prefixes may be omitted (as indicated below by the “–” sign), but in Anindilyakwa they are tightly bound to the noun root (as indicated by the “+” sign):

	Anindilyakwa	Wubuy	Ngandi
seagrass [VEG]	<i>ma+wurrəra</i>	<i>ama-wurruri</i>	<i>ma-wurruri</i>
ticks, fleas [COLL]	<i>wurr+amərnda</i>	<i>waa-murndik</i>	<i>a-murndik</i> ‘NEUT-louse’
hawk [MASC]	<i>ji+nəkarrka</i>	<i>jii-nikarrka</i>	<i>a-jikarrka</i> (NEUT)

Table 2: Anindilyakwa free pronouns and prefixes on nominals and intransitive verbs – non-humans

Noun classes	Gloss	Nominals	Intransitive verbs	Free pronouns
animate	MASC	<i>y-</i>	<i>n-</i>	(<i>yi</i>)ngalhuwa
	FEM	<i>dh-</i>	<i>ying-</i>	ngalhuwa
	COLL	<i>wurr-</i>	<i>na- ~ nuw-</i>	abərruwa
inanimate	VEG	<i>m(a)-</i>	<i>nəm-</i>	(<i>mə</i>)ngalhuwa
	NEUT	<i>a- ~ e-</i>	<i>na- ~ nuw-</i>	(<i>a</i>)ngalhuwa

The class prefixes on adjectives, on the other hand, are variable, as illustrated in (3) for *arəma* ‘big’, as are the gender prefixes for humans (4):

- (3) a. *y-arəma yaraja*
MASC-big MASC.goanna
'big goanna'
 - b. *wurr-arəma wurrendhindha*
COLL-big COLL.rat
'big rat'
 - c. *m-arəma memərrerra*
VEG-big VEG.flathead
'big flathead'
- (4) a. *nə-balanda*
3M-white.person
'male non-Aborigine'
 - b. *dhə-balanda*
3F-white.person
'female non-Aborigine'
 - c. *wurrə-balanda*
3PL-white.person
'non-Aborigines'

Besides their ability to be used derivationally on nouns, as in (4), where biological sex of the referent is determined by the prefix, gender prefixes differ from noun class prefixes in that they are used on loanwords, as in the Macassan loan *balanda* above (which ultimately derives from *Hollander*). Loanwords with

non-human reference do not take noun class prefixes, such as the English loans *jukwa* ‘sugar’ and *bajungkula* ‘bicycle’, and the earlier Macassan loans *jurra* ‘paper, book’ (<*surat*) and *libaliba* ‘canoe’ (<*lepa-lepa*). Their noun class membership becomes apparent through agreement as in (5)

- (5) a. *m-arəma dəraka*
VEG-big truck(VEG)
'big truck'
b. *koton nəngə-nга-rrəngka-mа*
cotton(FEM) 1SG-FEM-see.PST-1.FOC
narrə-nга-lhungkuwabi-ju-wa-mа
3PL-FEM-grow-CAUS-PST-1.FOC
'I saw cotton that they were growing'

2.3 The verb

The verb is morphologically the most complex word class in Anindilyakwa. A single verb can express what may take a whole sentence in a language like English. Because of its internal complexity, much of what is accomplished by the syntax in other languages is carried out within the verb - expression of arguments, causativization, reflexivization, reciprocity and subordination. The complex templatic structure of the verbal word, where affix order is stipulated in the form of arbitrary position classes, is presented in Table 3.² The verbal template has a finite number of slots with a fixed order, and no embedding possibilities.

The only obligatory slots in this template are the pronominal prefixes in slots [-6] to [-4], the stem in [0] and the tense/aspect inflectional suffixes in [+3]. Note that the stem itself may be morphologically complex, and historically include compounded nominals (e.g. *-muku+lharri-* [fluid + fall] ‘to shed’ in 2c above). Although they are given separate positions in the template, the valency-changing causative suffix in [(+1)] and reflexive and reciprocal suffixes in [(+2)] contribute to the formation of the verb stem.

2.3.1 Main features of each slot

This section briefly summarizes the main features of each slot of the verbal template, in order to understand the basic morphosyntax of the language, which will

²A template is a flat structure where affixes are ordered with “no apparent connection to syntactic, semantic or even phonological representation” (Inkelas 1993: 560, cited in Nordlinger 2010). Templatic systems are not uncommon in the Australian context, especially for the head-marking polysynthetic languages of the north (Nordlinger 2010).

Table 3: Anindilyakwa verbal template (with optional elements in parentheses)

(+5)	Case
(+4)	-ma ~ -mərra
(+3)	Tense + Aspect
(+2)	Reflexive, reciprocal
(+1)	Causative
0	Stem
-1	Body part/generic
-2	Benefactive
-3	Quantifier
-4	Object
-5	Subject
-6	Mood

be necessary in our discussion of the reflexive construction of the language.

The obligatory PRONOMINAL PREFIXES zone, in slots [-6] to [-4], contains up to two prefixes that represent the arguments of the verb, plus an indication of mood, as part of a complex paradigm. This zone includes the first and second person pronominal prefixes, and third person gender prefixes for humans, and noun class markers for non-humans. Transitive prefix complexes with human referents may be portmanteau forms, which is why the three slots are merged as a fusion zone in Table 2.

There are four distinct intransitive and four distinct transitive series of prefixes: (i) realis, (ii) irrealis, (iii) imperative, and (iv) hortative. As is characteristic of the non-Pama-Nyungan languages (Verstraete 2005), the prefixes are combined with the tense/aspect suffixes (slot [+3]) to mark a variety of modal meanings. The Anindilyakwa system of eight series of (positive polarity) prefixes is unusually high: many non-Pama-Nyungan languages have a basic realis/irrealis distinction in the prefixes, but they do not differentiate between imperative or hortative mood, whereas some Gunwinyguan languages do not distinguish mood in the prefixes at all (e.g. Bininj Gun-wok, Ngalakgan, Ngandi), but employ suffixes instead.

The QUANTIFIER slot [-3] contains the quantifiers *mərnda-* and *wurra-* ‘many’, which also occur on nominals.

The BENEFACTIVE slot [-2] contains just one morpheme: the benefactive applicative *mən-*, which introduces a beneficiary argument to the verb, which then

knocks the theme argument out of object position. Compare the following examples, which are both transitive, but with a different argument structure: in (6a), the theme argument in object function represented by the pronominal prefix on the verb is a neuter class item (i.e., *akungwa* ‘NEUT.water’), whereas in (6b) the object is the beneficiary introduced by the benefactive applicative:

- (6) a. *n-akarrngə-na akungwa*
3M>NEUT-get-NPST NEUT.water
'he is getting water'
b. *ngənə-mən-akarrngə-na akungwa*
3M>1SG-BEN-get-NPST NEUT.water
'he is getting water for me'

In (6b), the theme *akungwa* ‘water’ is no longer represented on the verb but only occurs outside of the verb.

The BODY PART/GENERIC slot [-1] is filled by a nominal root drawn from a set of about 80 forms, which are either body parts or generics that classify an external specific noun. An example was given in (2b) above.

As is typical of the Gunwinyguan languages (Alpher et al. 2003), the STEM slot [0] may be simple or complex. Simple stems consist of a verb root to which the inflection for tense and aspect may be added directly (e.g. *-kwa-* ‘give’, *-lhəka-* ‘go’). Complex verb stems, on the other hand, are synchronically frozen combinations of an uninflecting element followed by an element that takes the inflections (e.g. *-yeng+bi-* ‘speak’, consisting of the nominal root *yeng-* ‘voice’ and the inflecting element *+bi-* ‘?’). Verb stems can furthermore be formed from nominals by the productive inchoative and factitive suffixes (see §2.3.2 below).

The CAUSATIVE slot [(+1)] contains the causative suffix *-ji-*, which derives transitive verbs from intransitive verbs. For example, *-jungwa-ji-* ‘to kill’ is derived from *-jungwV-* ‘to die’ in (7) below (see §2.3.3).

The REFLEXIVE/RECIPROCAL slot [(+2)] contains the reflexive suffix *-jungwV-* and the reciprocal suffix *-yi-*. These mutually exclusive suffixes derive intransitive verbs from transitive verbs, as was illustrated in (1) above and will be discussed in more detail in §2.3.3 and §3, respectively.

The obligatory TENSE+ASPECT slot [(+3)] contains the tense and aspect inflections, which combine with the pronominal prefixes to express various modal meanings. There are six main conjugational classes, organised around the verb root or the inflecting element of the complex verb stem. The tense/aspect suffixes distinguish past [PST] and non-past [NPST] tense, together with neutral aspect or a subtype of perfective aspect.

The very common *-ma* ~ *-marr̩a* suffix in slot [(+4)] occurs independently of tense and aspect, and is analysed by van Egmond (2012: 225–236) as a 1st person focalisation marker [1.FOC], indicating that the speaker expresses his or her perception of an event or state of affairs.

The CASE slot [(+5)] contains case suffixes, which can be used on a verb in a subordinate clause to relate it to the main clause (as they can in many other, mainly Pama-Nyungan, Australian languages). Such cases are called complementizing cases in the literature (Dench & Evans 1988), and can be divided into two basic types: C-complementizer case, where members of the subordinate clause are case-marked in agreement with a coreferential NP in the main clause, as in (7a), and T-complementizer case on members of the subordinate clause to express temporal, causal and other relationships with the main clause, as in (7b). The subordinate clause appears in square brackets.

- (7) a. *Arakbawiya warnə-mamalya nuw-akbardha-ŋə-ma*
 long.time.ago 3PL.M-people 3PL-be.afraid-PST-1.FOC
y-akina-lhangwa [*kənə-ngekbəraka-mə-lhangwa* *edhərra*
 MASC-that-DAT IRR.MASC>NEUT-make.PST-1.FOC-DAT NEUT.hole
emindha-manja].
 NEUT.nose-LOC
 ‘A long time ago people were afraid of them [*yangungwa* ‘MASC.eel’]
 making a hole in their noses.’
- b. *[kenu-warde-na-manja]*, *nungkw-aja kənu-warde-na*
 IRR.3M>2SG-hit-NPST-LOC 2SG.PRO-COFR IRR.2sg>3M-hit-NPST
 ‘if he hits you, you can hit him back’

In (7a), the dative suffix on the verb in the relative clause agrees with the oblique object of the verb in the main clause (afraid of x-DAT). The LOC case on the verb in (7b) signals that the subordinate clause has a conditional meaning.

2.3.2 Verbalizing suffixes

New verbs can be created from nominals by the very productive inchoative *-dhə-* and factitive *-ka-* ~ *-kwa* derivational suffixes.

2.3.2.1 Inchoative *-dhə-* (INCH)

This suffix turns a noun or an adjective into an intransitive verb, which means ‘to become [X]’. Some examples are listed in (8), which also include the inchoative suffix added to recent loanwords.

- (8) a. *-arəma* ‘big’ *-arəmə-dhə-* ‘to become big’
 b. *awinyamba* ‘NEUT.anger’ *-awinyamba-dhə-* ‘to become angry’
 c. *kərrəndəna* ‘leprosy’ (<Eng *quarantine*) *-kərrəndəna-dhə-* ‘to quarantine’
 d. *bungkawa* ‘boss, ruler’ (<Mac *pungawa*) *-bungkawa-dhə-* ‘to become ruler’

The following (9a–9b) are some sentence examples.

- (9) a. *Wurr-adhədhiyara karrə-rrəngkə-na-manja akina*
 3PL-young.girl IRR.3PL>NEUT-see-NPST-LOC NEUT.that
karrə-m-abuwarrkə-na-ma abərra-lhangwa mingeemina mena
 IRR.3PL-VEG-cover-NPST-1.FOC 3PL.PRO-POSS VEG.breast because
kəm-arəmə-dhə-mə=baba.
 IRR.VEG-big-INCH.NPST-1.FOC=REAS
 ‘If young girls see them [*engeemina* ‘NEUT.legless lizard’], they cover their breasts because they will get bigger.’
- b. *yirrə-ma-ngamba-ju-wa-ma nəmə-mərrkbalya-dhə-nə-ma ambaka*
 1PL-VEG-bathe-CAUS-PST-1.FOC VEG-soft-INCH-PST-1.FOC later
 ‘we soaked them [*mənhənga* ‘VEG.burrawang’] in water, and later they became soft’

As these examples show, a denominal verb behaves like any other verb in Anindilyakwa in taking full person/number/gender/mood and tense/aspect affixation.

2.3.2.2 Factitive *-ka-* ~ *-kwa-*

The factitive converts a noun or adjective into a transitive verb meaning ‘to make something [X]’, as illustrated in the dictionary entries in (10).

- (10) a. *-dharrba* ‘short’ *-dharrbu-kwa-* ‘shorten’
 b. *-abiyakarbiya* ‘three’ *-abiyakarbiya-ka-* ‘divide into three’
 c. *awinyamba* ‘NEUT.anger’ *-awinyamba-ka-* ‘to make angry’
 d. *alhəkəra* ‘NEUT.house’ *-lhəkəra-ka-* ‘erect, raise, build’

The examples in (11) are some textual examples of the factitive suffix.

- (11) a. *Nenə-ma-ŋə-ma* *yərda* *biya*
 3PL>MASC-take-PST-1.FOC MASC.supplejack and
 nen-abiyarbuwa-ka-ma *y-akina.*
 3pl>MASC-four-FACT.PST-1.FOC MASC-that
 'They took the supplejack cane and split it into four.'
 b. *a-mərndak-akina-ma amarda* *narr-ardadə-ka-ma*
 NEUT-many-that-INS NEUT.grass 3PL>NEUT-hot-FACT.PST-1.FOC
 'they heated them with leaves'

Factitive verbs can be reflexivized, as in example (20a) below.

2.3.3 Argument-changing affixes

As already mentioned, a number of derivational affixes alter the argument structure of the verb: the benefactive applicative prefix *mən-* in slot [-2] of the verbal template introduces non-subcategorized arguments, while the causative, reflexive and reciprocal suffixes change the valency of the verb. They are discussed here in turn, with the reflexive suffix given its individual §3.

2.3.3.1 Benefactive applicative prefix (BEN)

The prefix *mən-* is an applicative that adds a beneficiary or maleficiary object argument to the verb, that is, a person positively or negatively affected by the action denoted by the verb. This new beneficiary/maleficiary argument knocks out the previous patient/theme object argument, which now appears as a free nominal (as we have already seen in 6 above). Compare the following examples taken from texts, where the object prefix indexes a patient referent in examples (12a–13a), while an introduced beneficiary referent occurs on the verb in examples (12b–13b).

- (12) a. *y-akina yikarba* ***nəng-eni***-*ngayindhuh-ma*
 MASC-that MASC.woomera 1SG-MASC-want.PST-1.FOC
 'I want that woomera'
 b. *Akina awilyaba ngaya* ***ngarra-mən***-*ngayindhuh-na-ma.*
 NEUT.that NEUT.one 1SG.PRO 1SG>2SG-BEN-want-NPST-1.FOC
 'That's all I want for you.'
- (13) a. *biya na-ma-nga*
 and NEUT>NEUT-take-PST
 'and it [mother cat] took another [kitten]'

- b. *Arakbawiya narra-mənə-ma-ŋə-ma*
 long.time.ago 3PL>3PL-BEN-take-PST-1.FOC
wurrə-mərrə-mərrkbalya-lhangwa wurr-angara-ŋgariya engengkuwa.
 3PL-RDP-newborn.baby-POSS 3PL-RDP-young NEUT.spirit
 'A long time ago they took the spirits of newborn babies.'

In (12b), the argument introduced by the benefactive applicative is a beneficiary ('you'), while in (13b) it is a maleficiary ('they', i.e. 'newborn babies'). A beneficiary verb is a regular transitive verb which can be reflexivized, as we will see in §3 below.

2.3.3.2 Causative *-ji-* (CAUS)

The most usual meaning of the causative suffix is causal, hence 'to make X [verb]'. The verb to which the suffix is added is normally intransitive and becomes transitive. The sentences in (14) are textual examples of causativized verbs.

- (14) a. *Adhənəbawiya nə-ma-beka-ju-wa m-akina dəraka*
 first 3M-VEG-drink-CAUS-PST VEG-that truck(VEG)
amalyirra-mərra.
 NEUT.petrol-INS
 'First he filled the truck with petrol.' (Lit: 'he made the truck drink')
 b. *kureya ngə-ma-ngarre-na-ma m-ibina*
 have.a.try HORT.1SG-VEG-visit-NPS-1.FOC VEG-that.same
kə-ma-ŋamba-ji-ni=yadha
 IRR.1SG-VEG-bathe-CAUS-NPST=PURP
 'let me go and see if they [*mənhəŋga* 'VEG.burrawang'] are ready for
 me to soak them'

A causative verb is a regular transitive verb in that it can be reflexivized (§3).

2.3.3.3 Reciprocal *-yi* (RECP)

The reciprocal suffix *-yi-* occurs in slot [(+2)] together with the reflexive suffix discussed in the next section. The reciprocal decreases the verb's valency by one, whilst specifying that the subject and object are co-referential, plus adding the reciprocal meaning of two or more agents each engaging in the same action (i.e. 'to verb each other'). The suffix is usually added to a transitive verb, which may also include causatives. A textual example is given in (15).

- (15) *kembirra arakba na-kwee-yi-nə-ma*
 then compl.ACT 3pl-give-RECP-PST-1.FOC
na-məŋ-barri-yi-nə-ma yimərnda
 3PL-small.and.round-split-RECP-PST-1.FOC MASC.louse
na-kwee-yi-nə-ma arəŋka-manja
 3PL-give-RECP-PST-1.FOC NEUT.head-LOC
nuw-arrka-milyi-jee-yi-nə-ma
 3PL-small.and.many-hold-CAUS-RECP-PST-1.FOC
 ‘then they gave lice to each other and shared them and they held each
 other’s heads’

The reciprocal suffix also has a collective reading (as in 16), which is not uncommon cross-linguistically (see Evans 2003: 495 and references therein), and which also happens in the related languages Bininj Gun-wok (Evans 2003) and Wubuy (Heath 1984).

- (16) a. *nənə-rrəŋka wurr-ambilyuma wurrabajja*
 3M>COLL-see.PST COLL-two COLL.bird
nuw-angkarree-yi-na-ma
 COLL-run-RECP-NPST-1.FOC
 ‘he saw the two birds flying away’ (Leeding 1989: 448)
- b. *yirrə-ngambee-yi-na*
 1PL-bathe-RECP-PST
 ‘we all bathed’

The reciprocal suffix can co-occur with the transitivising benefactive applicative prefix, resulting in a morphologically intransitive verb as in (17).

- (17) *Kərr-ambarrngarna arakba karna na-mən-angkarree-yi-nə-ma?*
 2PL-how.many? now 2PL.this 3PL-BEN-run-RECP-PST-1.FOC
 ‘How many of you [Aboriginal women] have they [whitefellas] run off
 with now?’

Here, the [RECP] suffix has scope over the BEN prefix. The intransitive verb *-angkarr-* ‘run’ is made transitive by the [BEN] (‘run off with’), which in turn is detransitivized by the RECP (‘run off all together’): [BEN-run-RECP].

3 Reflexive *-jungwV-*

3.1 Introduction

The reflexive voice marker in Anindilyakwa is the suffix *-jungwV-*, which occurs in the same slot in the verbal template as the reciprocal suffix *-yi-*. It reduces the morphological valency of the verb by one and indicates the coreference of two participants of the verb, as was illustrated in (1) above and again in (18) below. In (18a), the intransitive verb *-ngamba-* ‘bathe’ is transitivized by the causative suffix *-ja-* (bathe-CAUS = ‘wash’), with the agent ‘woman’ and the patient ‘dress’ both represented on the verb by subject and object pronominal prefixes, respectively. In (18b), by contrast, only the subject is cross-referenced on the verb, as agent and patient are now co-referential.

- (18) a. *dhə-dharrəngka yingə-ma-ngamba-ju-wa dhərija*
3F-female 3F-VEG-bathe-CAUS-PST dress(VEG)
'the woman washed her dress'
- b. *dhə-dharrəngka yingə-ngamba-ja-jungu-na*
3F-female 3F-bathe-CAUS-REFL-PST
'the woman washed herself'

As this example shows, there are no reflexive pronouns in the language; reflexivity is only signalled by the suffix *-jungwV-* on the verb. Identification of the arguments of the verb is done on the verb in Anindilyakwa; free pronouns are common but optional, as in (2a), (7b), (12b) above and other examples below. In (18b), the only possible reading is co-reference of agent and patient. The co-reference of the reflexive verb contrasts with the disjoint reference of the transitive verb in (19):

- (19) *dhə-dharrəngka nanga-ngamba-ju-wa*
3F-female 3F>3F-bathe-CAUS-PST
'the woman₁ washed her₂'

Here, the verb does not have a reflexive marker, plus its pronominal prefix represents both an agent and a patient. Therefore, there is no other reading possible but disjoint reference. The use of the reflexivizer is not subject to specific conditions relating to person or number: the same suffix is used for every person and number. Although the examples given so far all involve third person participants, the following textual examples involve 1st person plural (20a), 1st person singular (20b) and 2nd person singular (20c).

- (20) a. *Yirr-akakərəma-ka-jungu-na-ma ngawa*
 1PL-know.how.to-FACT-REFL-NPST-1.FOC cont.ACT
 wurru-balanda-lhangwa a-mərndakijika adhuwaba ena-manja
 3PL-non.Abstin-POSS NEUT-things today NEUT.this-LOC
 ayangkidharrba.
 NEUT.island
 ‘We have learnt about white man’s things on this island.’
- b. *ngalha-ja dh-akina narrang-anga-manja ena*
 FEM.PRO-EMPH FEM-that FEM>3PL-bite.PST-LOC NEUT.this
 nəŋə-dhaka-jungu-nu-ma
 1SG-burn-REFL-PST-1.FOC
 ‘when she [spider] bit them [me or you] I just burnt myself [where I got bitten by the spider]’
- c. *Kemba kə-lhəka-ja-ma nəngk-ena m-ardədarra-manja*
 then IRR.2SG-go-NPST-1.FOC 2SG-this VEG-hot-LOC
 kə-karri-jungu-na-ma m-ardədarra-manja.
 IRR.2SG-roast.in.ashes-REFL-NPST-1.FOC VEG-hot-LOC
 ‘Then you should go in the hot [sun(VEG)] and roast yourself in the hot [sand(VEG)].’

The suffix can equally well be used with non-human, even inanimate, participants:

- (21) a. *mema ma-mə-ki-yelhiya m-ibina nəmi-yelhiye-na-ma*
 VEG.this VEG-INALP-NMLZ-be.shy VEG-that VEG-be.shy-NPST-1.FOC
 nəm-abuwarrka-jungu-na-ma
 VEG-hide-REFL-NPST-1.FOC
 ‘the name *maməkiyelhiya* [shy crab] means “that one that is shy” [because] it always hides itself’
- b. *m-akinee=ka dəraka ngakurra-lhangwa,*
 VEG-that=EMPH truck(VEG) 12PL.PRO-POSS
 nəma-mənu-wardhi-jungu-na-ma
 VEG-BEN-work-REFL-NPST-1.FOC
 ‘that truck of ours, it has to work for itself’

In (21b), the reflexive construction involves coreference of the agent not with a patient argument but with a beneficiary, which is introduced by the benefactive applicative. Without the reflexive suffix, the verb would be transitive (e.g. ‘the

truck has to work for us'), with both the subject and the beneficiary represented on the verb by pronominal prefixes. The reflexive suffix detransitivizes the verb: the truck has to work for itself. Coreference of the subject agent with semantic roles other than patient is the topic of the next section.

The reflexive suffix can also be used on nominalized verbs, which in Anindilyakwa can be used as non-finite verbs:

- (22) *Arakbawiya warnəmamalya nənə-ma-nə-ma*
long.time.ago 3PL.people 3PL>MASC-take-PST-1.FOC
y-akaka-lhangwa yi-nə-m-akarrnga warni-ku-mərndi-jungwi=yadha.
MASC-this-POSS MASC-M-INALP-teeth 3PL.M-NMLZ-comb-REFL=PURP
'A long time ago people used to take the sawfish (*yikurrərrəndhangwa*)
teeth to comb their hair (Lit: to comb themselves)' (Dictionary 1993: 123)

Since in Anindilyakwa, the pronominal prefix on the verb can either encode the possessor of the body part ('the whole'), or the body part itself (the choice between the two is semantically motivated: see van Egmond 2012: Chapter 7), the subject agent argument being coreferential with the object theme argument in (22) is unproblematic: the combing of hair is perceived as not just affecting the hair but the whole person.

3.2 Coreference of the subject with other semantic roles

While the reflexive construction frequently expresses coreference of the agent subject with the patient referent in object function, the subject can be co-referential with other semantic roles as well. This is only possible for participants registered on the non-reflexive verb by the object pronominal prefix, which are: (i) recipient argument of inherently ditransitive verbs, and (ii) beneficiary argument introduced by the benefactive applicative. Coreference of the subject with other semantic roles, such as (iii) possessor, and (iv) spatial referent, cannot be expressed by a reflexivized verb in Anindilyakwa. These four instances are discussed here in turn.

3.2.1 Reflexivized ditransitive verbs: Coreference of subject with recipient

For inherently ditransitive verbs, such as 'give', 'tell' and 'send', the recipient is represented on the verb in object function, while the theme argument occurs outside of the verb, as shown in (23). When such a ditransitive verb is reflexivized, it is business as usual: the verb becomes morphologically intransitive, with the

subject agent being co-referential with the argument in object position, which now is the recipient, as in (24).

- (23) a. *nanga-kwa jurra*
3F>3F-give.PST book(NEUT)
'she gave her a book'
 - b. *yirrenə-maka-marra ena alhawudhawarra akina*
3M>1PL-tell.PST-1.FOC NEUT.this NEUT.story NEUT.that
'he told us this story'
- (24) a. *yingu-kwa-jungu-na jurra*
3F-give-REFL-PST book(NEUT)
'she gave herself a book'
 - b. *nə-maka-jungu-na-marra ena alhawudhawarra akina*
3M-tell-REFL-PST-1.FOC NEUT.this NEUT.story NEUT.that
'he told himself this story'

The examples in (24) are regular reflexive constructions; the only difference is that the subject is now co-referential with the recipient, rather than the patient.

3.2.2 Reflexivized benefactives: Coreference of subject with beneficiary

As already mentioned in §2.3.3, the benefactive applicative introduces a beneficiary argument to the verb, which knocks the theme/patient argument out of the object prefix position, as in (25a), repeated from (13b) above. When reflexivized, the subject thus becomes co-referential with the beneficiary, as in (25b).³

- (25) a. *Akina awilyaba ngaya ngarra-mən-ngayindhe-na-ma.*
NEUT.that NEUT.one 1SG.PRO 1SG>2SG-BEN-want-NPST-1.FOC
'That's all I want for you.'
- b. *Akina awilyaba ngaya nəngə-mən-ngayindhe-jungu-na-ma.*
NEUT.that NEUT.one 1SG.PRO 1SG-BEN-want-REFL-NPST-1.FOC
'That's all I want for myself.'

Here are some more examples of reflexivized benefactives:

³This example is made up by me based on my knowledge of the language and has not been tested with speakers. However, (26–27) are real life examples taken from texts, which support the validity of (25b).

- (26) *ngarrəbukurra-lhangwa engengkuwa ngarrəbə-mənə-rangka-jungwa*
 12TRI.PRO-POSS NEUT.life 12TRI-BEN-look.after-REFL.NPST
ajungwa
 NEUT.sickness
 ‘we three must start looking after our own lives and sicknesses’
- (27) *nungkuwa-lhangwa ngə-məni-yakuwerribika-jungu-ma nara,*
 2SG.PRO-DAT NEG-BEN-think-REFL.NPST-1.FOC NEG
wurri-yukwayuwa yakuwa-lhangwa wurra-məni-yakuwerribiki-na
 3PL-small.PL 12PL.PRO-DAT IMP.2PL>3PL-BEN-think-NPST
 ‘don’t think about yourself, think about our children’

From these examples, it appears that the reflexive overrides the benefactive applicative. In (27), for example, the intransitive verb *-yakuwerribiki-* ‘think’ is made transitive by the benefactive marker (‘think of our children’), which in turn is detransitivized by the reflexive marker (‘think of yourself’): [BEN-think-REFL]. Regarding the ordering of semantic composition, it has not been tested with speakers whether reflexive formation can precede the benefactive and I have not found any instances in the textual data. Hence the question of how examples such as ‘he cut himself for them’ are realized, i.e. whether the object slot can be re-filled by the benefactive argument (i.e. [BEN-cut-REFL]), is an interesting topic for further research.

3.2.3 Coreference of subject with possessor

The possessor is expressed by a pronoun marked with possessive case, as in (28). The head noun is represented on the verb. When the subject and the possessor referent are the same person, number and gender, this can result in ambiguity, as in (29).

- (28) *nungkə-lhangwa yikarba nəngen-ngayindha*
 2SG.PRO-POSS MASC.woomera 1SG>MASC-want.NPST
 ‘I want your woomera’
- (29) *enuwə-lhangwa yikarba nənə-ngayindha*
 3m.PRO-POSS MASC.woomera 3M>MASC-want.NPST
 ‘he₁ wants his_{1/2} woomera’

Since the free pronoun *enuwa* and the subject prefix on the verb both mean ‘third person singular masculine’, they can be both coreferential and disjoint. The

intended meaning must come from the context or by specifying the possessor. However, even though constructions such as (29) potentially express coreference between two clause participants (here, agent and possessor), there is no special form that signals the coreference. Therefore, I do not consider such examples to represent reflexive constructions (see Haspelmath (2023 [this volume])).

3.2.4 Coreference of subject with spatial referent

A spatial referent is expressed by a nominal marked with e.g. locative case for a stative location. When the subject and the spatial referent have the same person, number, gender features, this again can result in ambiguity, as in (30).

- (30) *yingən-rrəngka yingarna dh-akina-manja*
 3F>MASC-see.PST MASC.snake 3F-that-LOC
 ‘she₁ saw a snake next to her_{1/2}’

Since the demonstrative *dhakina* and the subject prefix on the verb both mean ‘third person singular feminine’, they can be coreferential and disjoint and the sentence is ambiguous. But again, since there is no special form that signals the coreference, such examples do not instantiate the reflexive construction.

4 Related functions and diachronic development of *-jungwV-*

The reflexive suffix is homophonous to the verb *-jungwV-* ‘to die’, which belongs to the same verb class. The reflexive suffix and the ‘die’ verb can co-occur, suggesting they are not the same morpheme as shown in (31).

- (31) *akina akwalya na-jungwa-ja-jungu-nə-ma*
 NEUT.that NEUT.fish NEUT-die-CAUS-REFL-PST-1.FOC
 ‘the fish killed itself’

This could mean that the reflexive suffix is a grammaticalized form of the (intransitive) verb *-jungwV-* ‘die’ whose semantics has become bleached. However, there is another possible historical source for this suffix, which is the reflexive reconstructed for the ancestor of the Gunwinyguan languages, called proto-Gunwinyguan (Alpher et al. 2003). Most Gunwinyguan languages have a suffix that derives reflexive and/or reciprocal verbs from transitive stems. Alpher et al. (2003: 342) note that in many Gunwinyguan languages, reflexive and reciprocal

meanings are covered by the same suffix, except in Wubuy, Ngandi and Warray (see Figure 1) (as Anindilyakwa was still presumed an isolate then, they did not include this language in their discussion). Due to the great distance between Warray on the one hand, and Wubuy and Ngandi on the other, they argue, the distinctive reflexive and reciprocal forms cannot be an innovation (p. 342–343). The contrast between the two must therefore be archaic, and they reconstruct reflexive **-yi-* and reciprocal **-nji-* for proto-Gunwinyguan (pGN).

The Anindilyakwa reciprocal *-yi-* (which synchronically has a rare alternate form *-nji-*) could then have derived from pGN **-nji-* as suggested in (32).

- (32) pGN reciprocal **-nji-* > **-ji-* (loss of nasal) > *-yi-* (lenition)

The reflexive suffix *-jungwV-* is more difficult to derive from pGN **-yi-*. It is possible that it is segmentable into *-ji.ngwV-*, where *-ji-* represents a hardened **-yi-*. The high vowel obtains its rounding from the rounded dorsal segment *-ngwV-* (recall that this is how [u] is formed in Anindilyakwa as shown in (33)).

- (33) pGN reflexive **-yi-* > **-ji-* (hardening) > **-ji-ngwV-* (addition of *ngwV* segment) > *-jungwV-*

Perhaps it was the verb *-jungwV-* ‘die’ that triggered the formation of the reflexive suffix.

5 Conclusions

As expected of a polysynthetic language, the arguments of a verb are identified on the verb, in the case of Anindilyakwa by means of pronominal prefixes. Free pronouns are common but optional. The language has a range of argument-changing affixes, one of which is the reflexive suffix. Anindilyakwa reflexive voice is marked by a verbal suffix that occurs on transitive verbs and reduces the valency of the verb by one. It is used for all persons, numbers and degrees of animacy of the participants involved. The suffix signals that the agent subject is co-referential with the referent that previously occurred as the transitive object pronominal prefix. This is mostly a patient referent, but it can also be a beneficiary introduced by the benefactive applicative, or the recipient referent of an inherently ditransitive verb.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

1.FOC	first person focalization marker	MASC	masculine noun class
CofR	change of referent	NEUT	neuter noun class
COLL	collective noun class	NPST	non-past
EMPH	emphatic	PGN	proto-Gunwinyguan
ENG	English	PRO	pronoun
FEM	feminine noun class	PURP	purposive
HORT	hortative	RDP	reduplication
INALP	inalienable possession	REAS	reason
INCH	inchoative	TRI	trial
MAC	Macassan language	VEG	vegetable noun class

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Chapter 21

The reflexive construction in Jaminjung/Ngaliwurru

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Jaminjung/Ngaliwurru, a language of the Western subgroup of the Australian Mirndi family, has a single reflexive construction which is marked by a derivational affix on the verb; there are no reflexive pronouns in the language. This paper provides an overview of the formal and functional characteristics of this construction, in a comparative perspective. Reflexive marking renders a verb morphologically and syntactically intransitive. Unlike in a number of other Australian languages, the construction does not have a general detransitivising function. Rather, it is restricted to encoding both volitional and non-volitional self-directed actions. Specific subtypes discussed here are actions affecting an inalienable part of the subject, expressed by means of an external possession construction, and certain auto-causatives of position and spatial arrangement. As is common among languages of Australia with verbal reflexive marking, the reflexive construction also has a reciprocal function.

1 Introduction

This paper provides an overview of the form and functions of the reflexive construction in Jaminjung/Ngaliwurru, a language of the Western subgroup of the Australian Mirndi family (Chadwick 1997; Harvey 2008). Jaminjung and Ngaliwurru are two named varieties of a single language, i.e. they are mutually intelligible. The main differences between these are of a lexical nature; there is no difference between the two varieties as far as the reflexive construction and its uses are concerned.



Taken together, Jaminjung and Ngaliwurru are spoken today by fewer than 50 people in the areas of Katherine, Timber Creek, and Kununurra in Northern Australia. The approximate location of the area for which Jaminjung and Ngaliwurru people are traditional owners is shown in Figure 1. The first language of younger people in these communities, and the language mostly used in day-to-day communication, is Kriol (also known as Roper River Kriol), an English-lexified creole language (Harris 1986; Schultze-Berndt et al. 2013).



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Figure 1: Approximate location of Jaminjung and Ngaliwurru traditional country

The discussion of reflexives is based on fieldwork spanning more than 25 years by the author and collaborators. The resulting documentation corpus Schultze-Berndt et al. (2017) includes various genres ranging from narratives, procedural texts, and fictive and actual dialogue to elicitation by translation or (verbal or visual) scenarios. References accompanying each example indicate the file name and transcript line number under which it is archived in the DoBeS Endangered Languages Archive (<http://dobel.mpi.nl/research/>; access upon request).

Jaminjung/Ngaliwurru has a single construction that meets the definition of a reflexive construction in Haspelmath (2023 [this volume]) in that it has a marker with the specialised function of indicating coreference between two participants in a clause. The reflexive marker is an invariable verbal suffix; there are no reflexive pronouns in the language (for a list of free pronouns, see Appendix A). It is also used in reciprocal function, but has no additional (e.g. detransitivising) functions.

Following an introduction to the main relevant grammatical properties of Jaminjung/Ngaliwurru in §2, the formal properties of the construction are described in §3. §4 provides more detail on the semantic range of the reflexive construction, while the reciprocal function will be briefly discussed in §5. §6 provides a brief overview and illustration of cases of coreferentiality of subjects and non-objects, none of which license the reflexive construction. The main features of the reflexive/reciprocal construction are summarised and discussed in an areal and typological perspective in §7.

2 Grammatical background

In terms of its morphological type, Jaminjung/Ngaliwurru can be characterised as agglutinative to fusional. Verbs are the most complex class morphologically, since they are obligatorily marked for person and number of subjects and (for transitive verbs) objects, and for tense, aspect and modality. Verbs fall into two non-overlapping transitivity classes in terms of their paradigm of pronominal prefixes, as illustrated in (1). Morphologically intransitive inflecting verbs only have a subject index; morphologically transitive verbs mark both subject and object.

(1) Examples of intransitive and transitive inflecting verb forms

- a. *ga-ruma-ny*
3MIN-come-PST.PFV
'he/she/it came'
- b. *gani-wa*
3MIN>3MIN-bite.PST.PFV
'it bit him/her'

All ditransitive predicates are morphologically transitive (Schultze-Berndt 2010). Usually, the recipient rather than the theme is cross-referenced by the object prefix on the verb, but this depends on the relative animacy of recipient and theme.

Most morphologically transitive verbs have a reflexive counterpart which follows the intransitive paradigm (for details see §3). This is the only detransitivising morpheme (in fact, the only valency-changing morpheme) in Jaminjung/Ngaliwurru.

Tense and aspect are marked by suffixation or stem suppletion; as is common cross-linguistically, an inflectional aspectual distinction (perfective vs. imperfective)

tive) is only made in the past tense. Modality is marked by prefixation (with a distinction between imperative, potential/future, and irrealis forms). The structure of inflecting verb forms, already illustrated in (1), is schematically represented in (2).

(2) Inflecting Verb Structure

(IMP/IRR-)SBJ-OBJ.MIN-(POT-)[OBJ.AUG/UA-]root(-REFL)(-TENSE/ASPECT)

The combination of cross-referencing on the verb and (optional) case-marked noun phrases makes Jaminjung/Ngaliwurru a double-marking language in the terminology of Nichols (1986). Case marking is by phrase-level enclitics. The alignment system for core arguments is ergative-absolutive (at a morphological, not a syntactic level); however, Jaminjung/Ngaliwurru exhibits “optional” (fluid) ergativity in that the presence of case marking on agents depends on a variety of factors including person and information structure (Schultze-Berndt 2017; Schultze-Berndt & Meakins in preparation). Constituent order is pragmatically conditioned and does not serve to mark grammatical roles, and noun phrases can be freely omitted if their referent can be retrieved from discourse.

Throughout this paper, the terms ‘subject’ and ‘object’ will be used in a semantic sense, as a shorthand for core participants with the macro-roles of Actor and Undergoer, respectively. Example (3) illustrates a transitive clause where the subject is represented by an ergative-marked noun phrase and the first prefix slot on the verb, and the object by an absolute noun phrase and the second prefix slot on the verb.

(3) *Gumurrinji=ni=biyang bul gan-arrga gudarlg.*

emu=ERG=SEQ emerge 3MIN>3MIN-approach.PST.PFV brolga

‘The emu then approached the brolga.’ [ES96-A01-01.022]

An important characteristics of Jaminjung/Ngaliwurru – shared with a number of unrelated languages of the area – is the existence of two distinct predicative parts of speech. Verbs of the obligatorily inflecting type discussed above form a closed class with approximately 30 members (depending on the variety and speaker). They encode semantically generic events or states. In addition, there is an open class of semantically specific items restricted to predicative function but incompatible with inflectional marking, and therefore termed uninflecting verbs; other terms used in the literature are ‘coverb’ and ‘preverb’ (see Schultze-Berndt 2003, 2017; and McGregor 2002 for further discussion).

Inflecting verbs can occur as simple predicates in independent clauses, or combine with one or (rarely) two uninflecting verbs. The resulting combinations

meet the widely accepted definition of complex predicates as monoclausal constructions, found in a single intonation unit, where two or more predicative constituents jointly contribute to the argument structure of the clause, share at least one semantic argument, and share values for tense, aspect, modality and polarity (see e.g. Butt 1997: 108, 2010). In terms of both their lexical semantics and their argument structure they form nuclear junctures, in the terminology of Role and Reference Grammar (Foley & Olson 1985).

The semantic valency or argument structure of a complex predicate, in most instances, matches the morphological transitivity of its inflecting verb, but there are exceptions (see also Schultze-Berndt 2015: 1126–1128). For example, the combination of uninflecting verb *bul* ‘emerge’ and inflecting verb *-ma-* ‘hit’, with a meaning of ‘appear’, is syntactically intransitive: it takes a single core argument in the absolutive (unmarked) case, as illustrated in (4).

- (4) *Barangan bul gani-ma-m.*
 moon emerge 3MIN>3MIN-hit.PRS
 ‘The moon comes out.’ [CS11-A103-01.057]

However, this syntactically monovalent status is not reflected in the morphological transitivity of the inflecting verb, which retains the transitive paradigm of pronominal indexing (with an invariable 3rd person singular, non-referential object prefix). Semantically intransitive complex predicates formed with a transitive inflecting verb therefore differ from (simple or complex) reflexive predicates in their morphological transitivity (see §3).

It follows from the above that the existence of a reflexive counterpart of a given transitive complex predicate depends on its semantics and not purely on the morphological possibilities of the inflecting verb involved.

Another grammatical feature relevant for the discussion of reflexives is the grammatical treatment of inalienably possessed body parts and other part-whole relationships in Jaminjung/Ngaliwurru. As is cross-linguistically common, the preferred way of expressing the involvement of a (body) part in a state-of-affairs is to treat the whole (or possessor) as a core argument in what has been termed an external possessor construction: the possessor is indexed on the verb and optionally (and rarely) represented by a noun phrase as well, while the body part is represented as an additional noun phrase which agrees in case with the possessor expression. This is illustrated in (5–6) for an intransitive and a transitive verb, respectively.

- (5) *Lurr ga-rdba-ny wirlga.*
pierce 3MIN-fall-PST.PFV foot
'She pierced her foot.' (lit: 'She fell such that she got pierced, with respect to her foot.') [ES97-n02-Jam.020]
- (6) *Jarlig wuju gulyu ba-ngu juwiya!*
child small wash IMP-get/handle nose
'Wipe the little child's nose!' (lit: 'Wipe the little child, with respect to his/her nose.') [ES12-N01-3Lgs.008]

Inalienable relations in Jaminjung include not only body parts, but also items in the personal sphere, such as a shadow or a name (see example 24 below), but not kinship relations. What is important in the present context is that the presence of the part expression does not increase the number of arguments of the predicate; it is licensed exclusively by the presence of a semantic argument representing the 'whole'.

3 Formal properties of the reflexive construction

In Jaminjung/Ngaliwurru, coreferentiality of subject and object is obligatorily marked by a verbal suffix *-ji* (past perfective portmanteau form *-ja*) which immediately follows the verb root, as shown in the verbal structure template in (2) and illustrated in (7).

- (7) Example of a reflexive verb form
ga-wirri-ja
3MIN-bite-REFL.PST.PFV
'he/she/it bit himself/herself/itself'

The suffix *-ji* is identical in form to the free 3rd person singular pronoun *ji*, but it is unclear whether they are etymologically related, as reflexive and other intransitivising suffixes cognate with *-ji* are widespread in Australian languages (Dixon 2002: 321). As the template in (2) and the comparison of examples (7) and (1) shows, in the verbal template the reflexive suffix is found in a different slot from any object indexing prefix. This distinguishes Jaminjung/Ngaliwurru and its close relative Nungali from more distantly related languages within the Mirndi family such as Wambaya (Nordlinger 1998) and Jingulu (Pensalfini 2003), which mark the reflexive by means of an invariable object prefix. It thus appears that the reflexive construction of Jaminjung/Ngaliwurru is an innovation at the

level of the Western Mirndi (Yirram) subgroup. Jaminjung/Ngaliwurru does not have reflexive pronouns or any other reflexive marker (see the pronouns in Table 2, in Appendix A).

Reflexive marking interacts with tense/aspect marking: except for the past imperfective, the productive tense/aspect suffixes on non-reflexive verbs are not employed on reflexive verbs, and portmanteau forms are used instead, listed in Table 1. These portmanteau suffixes appear even on verbs that otherwise mark tense/aspect distinctions by suppletion. They are clearly described, with the same forms as in the recent corpora, in Cleverly (1968) and Bolt et al. (1971).

Table 1: Reflexive and tense-aspect marking

	Reflexive+tense/aspect	Other tense/aspect allomorphs
untensed	- <i>ji</i>	–
PRS	- <i>ji</i>	- <i>m</i> , - <i>ya</i>
PST.PFV	- <i>ja</i>	-∅, - <i>ny</i>
PST.IPFV	- <i>ji-na</i>	- <i>na</i> , - <i>nyi</i>

The reflexive suffix also has the function of reciprocal marking (see further §5). Since it changes the morphological transitivity of the verb, it is analysed here as a derivational affix, although the construction also corresponds to what Haspelmath (2023 [this volume]) terms reflexive voice. It has a detransitivising effect in that it results in otherwise morphologically transitive verbs taking the intransitive paradigm of person prefixes (see §2). However, rather than having a general detransitivising function, it is semantically restricted to marking reflexive or reciprocal action (see further §4 and §5).

Syntactically, likewise, a reflexive verb is intransitive: it is not compatible with an ergative-marked argument representing the subject (although an instrumental phrase, marked with the same ergative/instrumental case marker, can be added). The morphological and syntactic contrast between the transitive verb *-angga-* and its (suppletive) reflexive version is illustrated in (8–9).

- (8) (*Marlayi=ni*) *gulyu=biyang gan-angga-m*
 woman=ERG/INS wash=SEQ 3MIN>3MIN-get/handle-PRS
gugu=ni.
 water=ERG/INS
 '(The woman) is washing it with water.' [ES12-A02-02.203]

- (9) (*Ngayug*) *gulyu nga-bili-ji* *gugu=ni.*
 1MIN wash 1MIN-POT:get/handle-REFL water=ERG/INS
 ‘I will wash myself with water.’ (Bolt et al. 1971: 53)

For a few morphologically transitive inflecting verbs, e.g. *-muwa* ‘have’, no reflexive/reciprocal forms are attested in the data, due to semantic incompatibility or at least implausibility. In one case, a different verb systematically substitutes for the non-attested reflexive form of a morphologically transitive verb: For reflexively or reciprocally addressed speech, the ditransitive verb *-ngarna* ‘give’ replaces *-junggu* ‘say/do’, the usual speech-framing verb (which also has a range of other uses including both syntactically transitive and intransitive ones; see Schultze-Berndt 2008). As a speech-framing verb, *-junggu* ‘say/do’ combines with a quotation in place of a theme object and with an oblique-marked recipient, as illustrated in (10). Since only direct objects, not obliques, are accessible to reflexive marking, *-ngarna* ‘give’ – which allows for the encoding of the recipient as a direct object – is used instead, as shown in (11) (for an example of its reciprocal use, see 34).

- (10) “*Ba-manggu nami=ngunyi!*” *burru-yu=ngunggu*
 IMP-hit 2MIN=ABL 3AUG>3MIN-say/do.PST.PFV=3MIN.OBL
 jarlig=ni=gun, *ngih?*
 child=ERG/INS=EMPH TAG
 “Kill it yourself!” the children said to you, didn’t they?!”
- (11) “*Wanaja=warra nga-wu-yu?*” *ga-ngarna-ja*,
 do.what=DUBIT 1MIN>3MIN-POT-say/do 3MIN-give-REFL.PST.PFV
 ji=wung *warladbari*.
 3MIN=RESTR old.man
 “What am I going to do? (...)" he said to himself, (being) by himself, the
 old man.' (lit. ‘gave himself’) (Bowerbird and Crow story, recorded by J.
 Bolt; partially printed in Bolt et al. 1971: 130–134; glossing by ESB)

As example (11) also shows, reflexive marking reduces the valency of a ditransitive predicate to two core arguments. Usually, as in (11), it indicates coreference between the subject and the recipient object; only in the case of a theme object which is animate or a natural force is coreference of the subject with a theme object also attested, as in (12). This variable reference of the reflexive suffix reflects the similarly variable reference of the object prefix in the non-reflexive usage of ditransitive predicates (Schultze-Berndt 2010).

- (12) *Yurr̥ ga-rra-ji ngurrgban.*
 show 3MIN-put-REFL.PRS rainbow
 ‘A rainbow shows (after the rain).’

As already pointed out in §2, Jaminjung/Ngaliwurru does not have any valency-changing derivational morphology apart from the reflexive construction, nor does it exhibit voice marking. The possibility of combining the same uninflecting verb with different inflecting verbs (illustrated in 3 compared with 4) can fulfil the same functions as applicative markers, causativisers, and other valency-changing morphology in many other languages (Schultze-Berndt 2015: 1132–1145). As discussed in more detail in §4 below, the reflexive construction is restricted to encoding self-directed (autopathic) actions.

4 Function of the reflexive construction

The reflexive construction is a semantic reflexive in the terminology of Geniušienė (1987: 27): it is restricted to expressing coreference of subject and object in what Comrie (1999) calls a ‘local domain’, i.e. when they are arguments of a single predicate, and it is used to encode autopathic actions, i.e. the subject referent acting upon him-/her-/itself. No instances of partial coreferentiality are attested, i.e. cases where the subject referent is a subset of the object referent.

This section discusses the three attested (not strictly delineated) subtypes of this use of the reflexive: prototypical reflexive actions where the object is presented as fully affected by the action of the coreferential subject (§4.1), reflexive actions affecting an (explicitly mentioned) part of the object (§4.2), and reflexive expressions of placement and position (§4.3); a summary of reflexive uses is provided in §4.4. For the reciprocal function of the same construction, see §5.

4.1 Full affectedness of object

The reflexive construction is used with both ‘extroverted’ and ‘introverted’ predicates. Typical examples are (13) to (17). These illustrate the use of the reflexive for deliberate self-directed actions, including self-grooming (14–15), as well as for events of accidental self-harm (16–17).

- (13) *Jiwuly nga-ba-ji birl-birl.*
 cool 1MIN-POT:hit-REFL RDP-fan
 ‘I will cool myself by fanning.’ [ES97-A01-02.130]

- (14) *Nginyju=biya mugurn ga-yu, janyung warr-warr*
PROX=SEQ sleep 3MIN-be.PRS another RDP-scratch
ga-mili-ji=rndi.
3MIN-get/handle-REFL.PRS=EGO
'This one is sleeping, the other is scratching itself.' [CS11-a102-01.007]
- (15) *Dirrma ga-ma-ja:::, malinygalg=gug.*
paint.up 3MIN-hit-REFL.PST.PFV pretty=LIMIT
'He painted himself, until he looked beautiful.' [ES09-A02-01.016]
- (16) *Majani=biya gunbarr yanthing-muwa, jibug yanthing-ijja-ji.*
maybe=SEQ sore IRR:2MIN>3MIN-have bust IRR:2MIN-poke-REFL
'You might get a sore, you might poke yourself.' [ES97-A01-01.301]
- (17) *Nganthan=warra warn gan-ngangu,*
what=DUBIT get.hooked 3MIN>1MIN-get/handle.PST.PFV
wardba=biyang nga-mili-ja, nga-rdba-ny.
entangle=SEQ 1MIN-get/handle-REFL.PST.PFV 1MIN-fall-PST.PFV
'Something (I don't know what) hooked me, I entangled myself, and fell.'
[ES03-A01-04.201]

4.2 Reflexive actions affecting a part of the object

Self-directed actions frequently only affect an (inalienable) part of the object; the use of reflexive constructions in these instances is termed 'partitive object reflexives' by Geniušienė (1987: 195–196) (see also Gaby 2023b). In Jaminjung/Ngaliwurru, the affected part is usually specified, in the form of an external possessor construction: an additional absolute noun phrase representing the part is licensed if the whole (possessor) is indexed as a core argument. As pointed out in §2, the presence of this additional noun phrase does not change the transitivity of the clause, i.e. it is not a syntactic object argument.

Typically, the part expression represents the body part of an animate which is impacted upon by the self-directed action, as in (18) to (20), or towards which attention is directed, as in (21).

- (18) *Ngulgul=wu ba-na reg, juwiya waipim*
snot=DAT IMP:2MIN>1MIN-give rag(Kriol) nose wipe:TR(Kriol)
nga-bili-ji.
1MIN-POT:get/handle-REFL
'Give me a rag for my snot, I want to wipe my nose.' [ES99-N01-Jam.073]

- (19) *Juwiya murrb ga-mili-ji.*
 nose covered.up 3MIN-get/handle-REFL.PRS
 'He is covering his nose.' [ES97-A03-01.162]
- (20) *Thed nganth-inama-ny, gad na-wirri-ja*
 trip.over 2MIN>3MIN-kick/step-PST.PFV cut 2MIN-bite-REFL.PST.PFV
jarra.
 mouth
 'You tripped over something, and you bit yourself on the lip.'
 [ES97-A03-06.144]
- (21) *Mung ba-ngayi-ji jurruny.*
 look.out IMP-see-REFL hand
 'Watch your hands!' (to avoid getting burnt) [ES15-N01-Ngar-Ngali.005]

Body parts, most prominently *burru* 'stomach', also represent emotions or mental states, giving rise to the use of the reflexive in combination with the external possession construction to express a self-directed emotion or mental effort, as in (22).

- (22) *Burru ngarrgina warlyang nga-rra-ja, burru jarlag*
 stomach 1MIN.POSS ahead 1MIN-put-REFL.PST.PFV stomach good
ng-agba.
 1MIN-be.PST.PFV
 'I had mentally prepared myself, I was calm.' (lit. 'I put my belly ahead, my belly was good') (before an operation) [CS15-A014-18.012]

Finally, as in other Australian languages (Gaby 2023b), items other than body parts can be treated as inalienably possessed parts in an external possessor construction, as long as they are considered intimately associated with the whole, such as clothing, a sore (23), a shadow, or a name (24).

- (23) *Yurr burra-ma-ji-na gunbarr=gayi.*
 rub 3AUG-hit-REFL-PST.IPFV sore=also
 'They also used to rub themselves (with it) on a sore.' [ES96-A18-01.265]
- (24) *Jinij nij ga-bili-ji=yinyag.*
 name say.name 3MIN-POT:get/handle-REFL=1UA.OBL
 'She should tell us two her name.' (lit. 'She should name herself (by way of her) name to us two.') [ES08-A08-02.046]

4.3 Reflexive expressions of placement and position

The final function of the reflexive construction in Jaminjung/Ngaliwurru is to form inchoatives of placement or position. This function is labelled ‘autocausative’ by Geniušienė (1987: 196–197), defined as “an action performed with one’s body and resulting in motion or change of position”. In Jaminjung/Ngaliwurru, however, only a subset of potentially autocausative meanings are expressed using the reflexive construction. It is not used at all for either translational or non-translational motion, and for most positionals, inchoatives are formed with the intransitive verb *-irdba* ‘fall; assume a position’, as illustrated in (25) (see Schultze-Berndt 2015 for further discussion).

- (25) *Ngamang nga-w-irdbaj motika=ni.*
be.astride 1MIN-POT-fall car=LOC
'I will get in the car.' [ES16-A07-06.004]

However, the reflexive of the inflecting verb *-arra* ‘put; place in a position’ is used in expressions of a subject simultaneously bringing about and entering a spatial arrangement (26) and for changes of position which require energy to maintain the position (27).

- (26) *Gurlbinyji=ni bad-bad ga-rra-ja.*
paperbark=ERG/INS RDP-covered 3MIN-put-REFL.PST.PFV
'He covered himself with paperbark.' [ES03-A03-01.024]
- (27) *Diddi ga-rra-ji.*
lean 3MIN-put-REFL.PRS
'He is leaning over.' [ES97-A03-01.219]

The uninflecting verb *jubard* ‘enclosed, shut in’ has the semantics of a positional. Consequently, with the reflexive of the verb *-arra* ‘put; place in a position’, *jubard* encodes shutting oneself away, as in (28).

- (28) *Garnmungul warnda walthub gan-antha, jubard*
bandicoot grass inside 3MIN>3MIN-take.PRS shut.in
ga-rra-ji warnda=ni.
3MIN-put-REFL.PRS grass=ERG/INS
'The bandicoot takes grass inside (a hole) and shuts itself up with the grass.' [ES03-N01-JAM.057]

The position entered can be restricted to a body part, which can be specified by means of an external possessor construction as already discussed in §2 and §4.2. An example is (29).

- (29) *Thandarlŋ ga-rra-ji jurruny.*
 straight 3MIN-put-REFL.PRS hand
 ‘She is straightening her arm.’ (lit. ‘She is putting herself straight (with respect to her) arm.’) [ES96-A08-03.304]

4.4 Function of the reflexive construction: summary

As the discussion in this section has shown, the reflexive construction in Jaminjung/Ngaliwurru, in its reflexive function, always encodes a self-directed action, including actions affecting only an inalienable part of the subject. In the case of positionals, this may not be obvious from the most idiomatic English translations, but taking into account the semantics of the generic verb *-arra* ‘put; cause to be in a position’ and the semantics of the accompanying uninflecting verbs of position, these expressions are fully covered by the description of the Jaminjung/Ngaliwurru reflexive construction as being restricted to the function of core reflexivity, with coreferentiality of an agentive subject and an affected object. In other words, it does not have a more general inchoative/anticausative function, and neither does it have any other detransitivising function such as antipassive.

Given this characterisation, it is not surprising that verbs that allow for the reflexive construction (in its reflexive rather than reciprocal function, for which see §5) are found towards the top end of a hierarchy (Wichmann 2015) generalised from the reflexive valency alternations in 16 languages in the Leipzig Valency database (Hartmann et al. 2013). In this hierarchy, the Jaminjung/Ngaliwurru equivalents attested in reflexive construal are marked in boldface in (31). Meanings shown in brackets only have reflexive uses in particular contexts; for ‘GIVE’ this is the speech framing use discussed in §3; for ‘BREAK’ this is the use in expressions of ‘breaking a limb’ as illustrated in (30).

- (30) *Football-nyunga bag ga-rra-ja marnal.*
 football-ORIG break 3MIN-put-REFL.PST.PFV ankle
 ‘From (playing) football he broke his ankle.’

Some of the gaps at the top end of the hierarchy in (31),¹ e.g. ‘HEAR’, may be accidental gaps in the data; however, ‘HIDE (oneself)’ and ‘DRESS’ are encoded with an intransitive and a (non-reflexive) transitive predicate, respectively.

¹Adapted from Wichmann (2015: 169).

- (31) **WASH, COVER, SHAVE, SHOW, CUT, SEE, HIDE, DRESS, [GIVE], TOUCH > LOOK AT, HEAR, [PUT], [BEAT], HUG, SMELL, TIE, THROW, HIT, KILL, LIKE, FEAR, WIPE > KNOW, PUSH, ASK FOR, TEAR, NAME, HELP > SEARCH FOR, THINK, TEACH, TAKE, SAY, CARRY, TELL, [BREAK], SEND > FRIGHTEN, TALK, LOAD > BUILD, STEAL > BRING, PEEL, COOK, FOLLOW, EAT > FILL, MEET, GRIND, SING, BURN, DIG, BE SAD, POUR, ROLL > SHOUT AT, BE DRY, SCREAM, LAUGH, RUN, PLAY, FEEL PAIN, LEAVE, GO > JUMP, SIT, BLINK, BOIL, BE A HUNTER > LIVE, RAIN, SINK, BE HUNGRY, DIE, FEEL COLD, CLIMB > SIT DOWN > COUGH**

5 Reciprocal function

As already indicated, the Jaminjung/Ngaliwurru reflexive marker also has a reciprocal use, a cross-linguistically frequent overlap (see e.g. Nedjalkov 2007b: 17; Maslova & Nedjalkov 2013). The reciprocal interpretation of the construction requires a non-singular subject; however, a reflexive interpretation (i.e. multiple agents engaged in reflexive action) is often also possible. For example, (32) could also mean ‘the dogs are (each) biting holes in themselves’. The interpretation is usually clear from context.

- (32) *Mud-mud burru-wirri-ji wirib thanthu.*
RDP-make.hole 3AUG-bite-REFL.PRS dog DEM
'Those dogs are biting holes in each other.' [ES97-A03-06.078]

The reflexive/reciprocal form of the inflecting verb *-ma* ‘hit’ with a non-singular subject is conventionally used to express ‘fighting’, as in (33). The equally conventionalised reflexive/reciprocal speech framing verb *-ngarna* ‘give’ is discussed in §3; its reciprocal function is illustrated in (34).

- (33) *Yangarra buny-ma-ji yirrginy=jirram, jurruny=ni.*
kangaroo 3UA-hit-REFL.PRS do.reciprocally=two lower.arm=ERG/INS
'The two kangaroos fight one another with their paws.' [ES96-A04-03]
- (34) “*Mindi-wardagarra-m ngiya gurang!*” *buny-ngarna-ja*
1+2MIN-follow-PRS PROX old.man 3UA-give-REFL.PST.PFV
babiny-majawari.
sister-DYAD
“Let’s follow this old man” the two sisters said to each other.
[ES08-A04-02.106]

A reciprocal interpretation can be available even with predicates encoding inherently symmetrical events such as ‘split up, scatter’ in (35) and with other state-of-affairs that are semantically incompatible with a reflexive interpretation, such as ‘look back at’ in (36).

- (35) *Mirdang nyanying=biya gani-yu, larrarra*
 night proper=SEQ 3MIN>3MIN-say/do.PST.PFV scatter
yirri-mili-ja, buru-buru yagbali-bina.
 1AUG-get/handle-REFL.PST.PFV RDP-return place-ALL
 ‘It really became night then, we scattered, (going) back to our places.’
 [CS15-A014-17.173-175]
- (36) *Mung=jirram buny-ngayi-ja wib.*
 watch=two 3UA-see-REFL.PST.PFV look.back
 ‘The two looked back (over their shoulders) at each other.’
 [ES01-A03-07.104]

The reciprocal function can optionally be made explicit by the addition of an adverb *yirrginy* ‘reciprocally, in return’, as shown in (33). This adverb is also compatible with predicates not marked with the reflexive/reciprocal suffix, e.g. in a biclausal reciprocal expression.

The Jaminjung reflexive/reciprocal does not have any of the additional functions cross-linguistically associated with reciprocal marking (König & Gast 2006: 9; Nedjalkov 2007a) such as collective/joint action (Nedjalkov’s ‘sociative’), iterativity, or distributivity.

6 Coreference of subject with non-objects

The reflexive construction cannot be used in the case of co-reference of the subject with any non-object. Such coreference is not encoded at all in Jaminjung/Ngaliwurru; rather, coreference with the subject is just one of the possible interpretation of free or enclitic pronouns in oblique functions. The following examples illustrate such pronouns in the functions of recipient/addressee (37), recipient/beneficiary (38), and possessor (39), with an interpretation of coreference with the subject. Outside the contexts for these specific examples, a non-coreferential interpretation is equally possible, as indicated in the translations.

- (37) “*Wanaja=warra nga-wu-yu*” *gani-yu*,
 do.what=DUBIT 1MIN>3MIN-POT-say/do 3MIN>3MIN-say/do.PST.PFV
ji=wu=wung.
 3MIN=DAT=RESTR
 “I don’t know what to do” he said to himself’ (or: ‘just to him’)
 (Bowerbird and Crow story, recorded by J. Bolt; transcription and
 glossing by ESB)
- (38) *Majani malinygalg nganjan burri-ngami=burrug*.
 maybe pretty what 3AUG>3MIN-see.PRS=3AUG:OBL
 ‘Maybe they see something nice for themselves.’ (or: ‘for them’)
 (describing the behaviour of thieves) [ES99-V01-06a.282]
- (39) *Mung gana-ma-na* *gujarding nuwina*.
 watch 3MIN>3MIN-have-PST.IPFV mother 3MIN:POSS
 ‘She was looking after her own mother.’ (or: ‘...after his/her mother’)
 [ES15-A03-10.030]

Cross-linguistically, intensifiers in adverbial function are frequently formally identical to reflexive pronouns (König & Siemund 2000; König et al. 2013: 9). In Jaminjung/Ngaliwurru, which lacks a reflexive pronoun, this function is fulfilled either by an absolute pronoun followed by the restrictive enclitic *=wung* (Schultze-Berndt 2002), or by a possessive pronoun with the agentive adverbialising suffix *-man*. These are illustrated in (40–41), respectively. No clear examples of pronouns as adnominal intensifiers have been found.

- (40) *Bugu ji=wung ngilijja ga-ngga*.
 just 3MIN=RESTR cry 3MIN-go.PRS
 ‘Just himself (i.e. without a cause) he is crying!’ [ES97-A01-05.145]
- (41) *Ga-rdba-ny, nuwina-man*.
 3MIN-fall-PST.PFV 3MIN.POSS-ADV
 ‘He fell, by himself (by his own mistake).’ [ES96-A09-02.216]

In sum, this section has provided further evidence that the function of the Jaminjung/Ngaliwurru reflexive construction does not extend beyond encoding coreference of agent and patient (subject and object) in expressions of self-directed action, as discussed in §4.

7 Conclusions

The preceding sections provided an overview of the formal and functional properties of the Jaminjung/Ngaliwurru reflexive construction. Jaminjung/Ngaliwurru does not have reflexive pronouns; the reflexive is marked by an invariable derivational suffix on inflecting verbs which renders the verb morphologically and syntactically intransitive (see §3). In §4 it was shown that the construction – even in its uses with positionals and in metaphorical uses – is restricted to indicating coreference between (semantic) subjects and objects, i.e. in what Comrie (1999) calls the ‘most local domain’, and that it always encodes self-directed (autopathic) actions. It cannot be used for co-reference of subjects with non-objects (§6), and it does not have any general detransitivising function such as inchoative/anticausative, nor is it used in nontranslational motion expressions such as ‘turn, swivel’.

The same construction, with nonsingular subjects only, functions as a reciprocal construction (see §5). Here it is restricted to events where the same participants simultaneously fulfil the role of agents and patients, and it does not have any additional functions such as collective/joint action, iterativity, or distributivity.

It should be pointed out that the Jaminjung/Ngaliwurru reflexive/reciprocal construction, while representative of a substantial subset of the languages in the Australian linguistic area (Dixon 2002: 320–321; Gaby 2023b), is by no means typical of all Australian languages. First, not all Australian languages have verbal reflexive marking; invariable reflexive pronouns are also found in a number of languages, for example in the Ngumpin-Yapa group which includes Warlpiri (Laughren 2023 [this volume]), Djaru (Tsunoda 2007) and Bilinarra (Meakins & Nordlinger 2013: 235–238). In these languages, moreover, reflexive clauses are formally transitive and allow for ergative-marked agents. Second, the formal overlap between reflexive and reciprocal marking is common (found in 28 of the 55 languages surveyed by Gaby 2023b), but even among those languages that have verbal reflexive marking, distinct verbal affixes for reflexive and reciprocal are found; examples are Kuuk Thaayorre (Gaby 2008 and Gaby 2023 [this volume]) and Warrungu (Tsunoda 2007). Third, functional extensions beyond the core reflexive and reciprocal meanings, attested in some Australian languages, are not found in Jaminjung/Ngaliwurru. For example, the reflexive/reciprocal verbal markers in Bininj Gun-wok (Evans 2003: 495–497) and (more marginally) in Nyikina (McGregor 2000: 114) also have a collective interpretation; other extensions of reciprocal marking found in Australian languages are pluractional, habitual, and continuative (Gaby 2023b). The reflexive construction has a

more general detransitivising function in a number of Australian languages, e.g. an antipassive function in Yidinj (Dixon 2002: 532) and in several other Pama-Nyungan languages discussed by Terrill (1997) and Janic (2016: 165–167). Even in a close neighbour of Jaminjung/Ngaliwurru, Wardaman, two of the closed-class verbs in their reflexive form function as inchoative markers (Merlan 1994: 208–210), and there are mediopassive verbs which exhibit the reflexive/reciprocal suffix but do not encode action on self (Merlan 1994: 191). Conversely, some languages, unlike Jaminjung/Ngaliwurru, use different constructions for volitional and non-volitional reflexive action (Gaby 2023b). Finally, some Australian languages, for example the Jarragan languages – western neighbours of the Western Mirndi languages – have a paradigm of middle verbs in addition to reflexive forms of transitive verbs (e.g. Kofod & Palmer 2007: 60 for Gajirrabeng). Thus, Australian languages exhibit considerable diversity in their encoding of reflexive meanings as well as the functional range of reflexive and reciprocal constructions.

To conclude, I will address the question of whether the findings for Jaminjung/Ngaliwurru support a number of universals that have been postulated for reflexive constructions (summarised in Haspelmath 2023 [this volume]); the numbering of the universals below follows Haspelmath's list). Only those universals that are applicable in this language will be considered (omitting any that only apply to reflexive pronouns, or only if the language has more than one reflexive construction, for example).

Jaminjung/Ngaliwurru confirms the universal [Universal I] that if a language has a verbal derivational/reflexive voice marker, one of its uses is for autopathic coreference (agent-patient). As the discussion in this paper has shown, this is in fact the only use of the Jaminjung/Ngaliwurru construction apart from the reciprocal use. This reflexive marker is obligatory for autopathic (self-directed) action, and only co-occurs with the intransitive (subject-indexing) person paradigm. This confirms the proposed universal [Universal V] that if a language has non-reflexive bound object person forms, these cannot be used coreferentially with the subject.

Dixon (2012: 141) proposes the generalisation [Universal VI] that if a language has a verbal reflexive marker, it also has a verbal marker for reciprocal constructions. This is also confirmed for Jaminjung/Ngaliwurru: as we have seen, in fact the two markers are identical.

An issue which is not as straightforwardly addressed is whether Jaminjung/Ngaliwurru also confirms Universal III from Haspelmath's (this volume) list. Haspelmath's formulation of this universal is as follows (in the version in Haspelmath 2008: 48: “In all languages, the primary reflexive-marking strategy is at

least as long as the primary disjoint-reference-marking strategy.”). This universal is based on assumptions about a universal asymmetry in the frequency of coreference (infrequent) as opposed to disjoint reference (frequent) between subject and object. The relative frequencies of reflexive and non-reflexive transitive verbs in a subset of the Jaminjung/Ngaliwurru corpora (247 files, comprising 16149 annotation units) certainly confirm these assumptions: out of 4610 potentially transitive verbs, only 168 (3.6%) were reflexive in form; this figure includes verbs in both reflexive and reciprocal interpretations. The principle of economy therefore demands that the more frequent disjoint-reference-marking strategy should be encoded by shorter, or at least not longer, forms than the less frequent reflexive-marking strategy. A proper application of this universal to Jaminjung/Ngaliwurru would involve a comparison of the length of all disjoint-reference verb forms with that of their corresponding reflexive verb forms while also taking into account the frequency of the respective verbs, which is beyond the scope of this paper. A brief glance at some common forms (42) suggests that the reflexive verb forms are not longer, but also not shorter than the corresponding non-reflexive forms: reflexive marking involves the addition of a suffix, but removes any object-indexing prefix (see §3 for details).

- (42) Comparison of verb forms encoding disjoint reference and coreference
(3rd person minimal/augmented)
- a. *gani-ma*
3MIN>3MIN-hit.PST.PFV
'he/she hit him/her'
 - b. *ganurru-ma*
3MIN>3AUG-hit.PST.PFV
'he/she hit them'
 - c. *burrurru-ma*
3AUG>3AUG-hit.PST.PFV
'they hit them'
 - d. *ga-ma-ja*
3MIN-hit-REFL.PST.PFV
'he/she hit himself/herself'
 - e. *burru-ma-ja*
3AUG-hit-REFL.PST.PFV
'they hit themselves (or: each other)'

If we also include the presence of argument noun phrases in the evaluation (which are however optional and often not present in coherent discourse), an expression involving both a subject and object noun phrase is obviously longer than a syntactically intransitive reflexive expression which only allows for a subject noun phrase. Thus Jaminjung/Ngaliwurru at least does not present a counter-example to the above generalisation.

Still, it is of interest to also consider the original formulation of this universal in Comrie (1999: 338), which is more straightforwardly confirmed by Jaminjung/Ngaliwurru: “Languages are likely to have special marked forms that indicate coreference within the most local domain (the predicate and its arguments), possibly extending to more expanded domains.”

If the expression ‘special marked forms’ is understood not in terms of length and thus (mechanical) economy of speech production, but rather in terms of the presence of a distinct, specialised construction that signals the unexpected state of affairs, the reflexive suffix in Jaminjung/Ngaliwurru clearly confirms this prediction. One therefore might consider whether the frequency–economy correlation cannot also be met by a conception of economy that is more subtle than mere length of forms, but rather also accounts for the processing load for a distinct construction.

Appendix A: Jaminjung/Ngaliwurru pronouns

Table 2 lists the forms of free pronouns in Jaminjung/Ngaliwurru, which are distinct from the pronominal prefixes. The absolute pronouns take the form of free pronouns or enclitics, oblique pronouns are always enclitics, and possessive pronouns are always free forms. The absolute pronouns are also the basis for ergative marking by means of the general ergative/instrumental enclitic.

The pronominal system (as reflected in the table and the glossing) follows a minimal-augmented pattern: the pronoun denoting the speaker-addressee dyad (‘inclusive dual’) patterns with the singular forms, and the corresponding unit-augmented form – which formally patterns with the dual pronouns – denotes three individuals: speaker, addressee and one additional person.

Table 2: Jaminjung/Ngaliwurru free and clitic pronouns (minimal-augmented system)

	ABS	OBL	POSS
1MIN	<i>ngayug</i>	<i>ngarrgu</i>	<i>ngarrgina</i>
1+2MIN	<i>mindi</i>	<i>mindag</i>	<i>mindajgina</i>
2MIN	<i>nami</i>	<i>(ngu)nggu</i>	<i>ngunggina</i>
3MIN	<i>ji</i>	<i>nu</i>	<i>nuwina</i>
1UA	<i>yirrinyi</i>	<i>yinyag</i>	<i>yinyajgina</i>
1+2UA	<i>yurrinyi</i>	<i>yunyag</i>	<i>yunyajgina</i>
2UA	<i>gurrinyi</i>	<i>gunyag</i>	<i>gunyajgina</i>
3UA	<i>burrinyi</i>	<i>bunyag</i>	<i>bunyajgina</i>
1AUG	<i>yirri</i>	<i>yirrag</i>	<i>yirrajgina</i>
1+2AUG	<i>yurri</i>	<i>yurrag</i>	<i>yurrajgina</i>
2AUG	<i>gurri</i>	<i>gurrag</i>	<i>gurrajgina</i>
3AUG	<i>burri</i>	<i>burrag</i>	<i>burrajgina</i>

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

1+2	1 st +2 nd person	LIMIT	limitative ('until')
>	subject acting on object	MIN	minimal
AUG	augmented	ORIG	origin, source, cause
COLL	collective 'all together'	POT	potential
DUBIT	dubitative	RDP	reduplication
DYAD	kinship dyad	RESTR	restrictive ('just x, still v')
EMPH	emphatic assertion	SEQ	sequential ('then')
EGO	speaker authority	TAG	tag
ITER	iterative	UA	unit augmented

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Chapter 22

Reflexive constructions in Kuuk Thaayorre

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Kuuk Thaayorre is an Aboriginal language of the west coast of Cape York Peninsula, Australia. Self-directed events may be described by a number of distinct Kuuk Thaayorre constructions, which may include one or more of the following forms: a reflexive voice suffix on the verb (-e); a reciprocal voice suffix on the verb (-rr); a reflexive pronoun, a self-intensifier pronoun; or an inherently reflexive verb. Alternatively, overt marking of reflexivity may be absent, with the self-directedness of the event left to inference. In addition to providing an overview of the various forms of reflexive marking in Kuuk Thaayorre, this chapter surveys the range of event types encoded by these forms. For example, the verbal reflexivizer often signals that multiple argument roles map to the subject argument, whether agent + patient, agent + beneficiary, agent + causer, and more. In many cases, it is only a subset (e.g. a body part) or the agent-subject that is acted upon, so the coreference of agent and patient roles is incomplete. In other cases, reflexive forms are used to signal the subject argument's heightened involvement in and/or affectedness by the event, whether or not they are agent of that event. Lastly, just as reciprocal morphology is found in the description of some reflexive events, so too is the verbal reflexivizer employed to describe some reciprocal events. This curious pattern of polyfunctionality may find its origins in the deep history of these forms; the final section of this chapter considers possible cognates and the semantic ranges of reflexive forms across the Pama-Nyungan family and the Australian continent more broadly.

1 Introduction

Kuuk Thaayorre is the language of the Thaayorre people, whose lands include the Aboriginal Shire of Pormpuraaw on the west coast of Australia's Cape York



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Peninsula (see Figure 1). It belongs to the Paman subgroup of the Pama-Nyungan language family. While some children are presently growing up as fluent speakers of Kuuk Thaayorre, the various policies promoting English through church, school and government services since colonization have had a dramatic impact upon language transmission. The number of people for whom Kuuk Thaayorre is a language of daily communication is declining, currently estimated at ~200. This chapter draws on narratives, recorded conversations and elicited data, which I compiled in collaboration with more than 30 Kuuk Thaayorre language experts between 2002 and 2008. It also draws on the rich example sentences included in Hall's (1968, 1972) theses and a dictionary created by Hall and Tom Foote¹ (Foote & Hall 1992). Dictionary examples were neither glossed nor translated in the original; glosses and translations are provided by the present author, and some examples modified to align with the orthography and morphological analysis adopted throughout this chapter. The transcriptions and glosses of examples from the theses Allen Hall have been likewise modified for orthographic and/or analytical consistency.



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https://upload.wikimedia.org/wikipedia/commons/2/25/Australia_map%2C_States-simple.svg

Figure 1: Map of Australia, showing location of Pormpuraaw

Kuuk Thaayorre is a predominantly dependent-marking language. The core syntactic functions are signalled by the case-marking of noun phrases, and optionally by pronominal enclitics to the verb. The redundant apposition of coreferential pronouns and noun phrases is a common rhetorical device. Conversely,

¹Mr Tom Foote was a Kuuk Thaayorre language expert and teacher in the school bilingual program.

core arguments are freely and frequently elided; neither subject nor object needs to be overtly realized in the clause. Word order is not employed to distinguish grammatical relations; subject, object and verb may occur in any order. Order within the noun phrase is more fixed, and only the final² constituent of an NP inflects for case. For nouns, the ergative case distinguishes transitive subjects from unmarked (absolutive) transitive objects and intransitive subjects. For pronouns, the accusative form of transitive objects is distinguished from the nominative (transitive and intransitive) subject form.

§2 begins with an overview of the Kuuk Thaayorre personal pronominal paradigm (§2.1), before detailing the forms of the reflexive pronouns (§2.2). §2.3 presents the Kuuk Thaayorre self-intensifier pronouns which, while they do not encode reflexivity as such, feature in clauses that would be translated by reflexive clauses in some other languages. The next section (§3) moves to consider verbal coding of reflexivity. Kuuk Thaayorre verbs obligatorily inflect for tense/aspect, in addition to hosting optional person-number enclitics cross-referencing the subject and/or object. Derivational morphology on the verb includes a valency-increasing (causative/applicative) morpheme, two associated motion morphemes, the reflexive voice suffix (§3.1), and the reciprocal voice suffix (§3.2). §4 follows with an overview of the range of event types coded by reflexive forms, including seemingly reciprocal events (§4.6). §5 considers the converse; the use of reciprocal morphology to code self-directed events. Reflexive marking can be said to be optional, inasmuch as there is no one-to-one correspondence between reflexive semantics and the verbal reflexivizer and/or reflexive pronoun. §6 concludes the chapter with a consideration of Kuuk Thaayorre reflexive constructions in the comparative context of Australian Aboriginal languages more broadly.

2 Pronouns

2.1 Personal pronouns

The Kuuk Thaayorre paradigm of personal pronouns distinguishes 1st/2nd/3rd person and singular/dual/plural number. Inclusive/exclusive 1st person pronouns are distinguished for nonsingular numbers. The nominative forms of each person/number/clusivity combination are presented in Table 1.

Personal pronouns inflect for case, reflecting the role of the pronoun in the clause. As mentioned in §1), the same case form (nominative) is used for both

²Except where the final constituent is an adnominal demonstrative, in which case the penultimate constituent inflects for case.

Table 1: Kuuk Thaayorre personal pronouns (nominative case forms)

1 st person		2 nd person	3 rd person
SG	<i>ngay</i>	<i>nhunt</i>	<i>nhul</i>
DU	<i>ngal</i> (inclusive), <i>ngali</i> (exclusive)	<i>nhip</i>	<i>pul</i>
PL	<i>ngamp</i> (inclusive), <i>ngancn</i> (exclusive)	<i>nhurr</i>	<i>peln</i>

Table 2: 1st person singular pronouns (all cases)

NOM	<i>ngay</i>
ACC	<i>nganh</i>
GEN	<i>ngathn</i>
DAT	<i>ngathun</i>
ABL	<i>ngathnma</i>

intransitive and transitive subjects. This and the further four case forms are illustrated for the 1st person singular pronoun in Table 2.

2.2 Reflexive pronouns

The etymology of reflexive pronouns is evident from their formal resemblance to the corresponding genitive and nominative pronoun forms, as demonstrated in Table 3.

Table 3: Singular pronouns (reflexive, genitive, and nominative forms)

	Reflexive	Genitive	Nominative
1SG	<i>ngathnay ~ngathney</i>	<i>ngathn</i>	<i>ngay</i>
2SG	<i>nhangknunt</i>	<i>nhangkn</i>	<i>nhunt</i>
3SG	<i>nhangnul</i>	<i>nhangn</i>	<i>nhul</i>

Table 3 represents the full set of attested reflexive pronouns, which can be said to distinguish number only inasmuch as they require a singular interpretation.³

³In special cases, a singular number reflexive pronoun appears in a clause with a non-singular subject, see §5 discussion.

There are no nonsingular (dual or plural) reflexive pronouns; reflexive clauses with nonsingular subjects are coded as such by other means (e.g. the verbal reflexivizer, verbal reciprocalizer, a lexical reflexive verb, but not a non-reflexive object pronoun), or left to inference (see Haspelmath 2023: section n. [this volume]).

Reflexive pronouns may be the sole marker of a reflexive clause (1),⁴ or they may combine with the verbal reflexivizer (or reciprocalizer, §5) to reinforce the reflexive meaning (2).

- (1) *ngay wash-m rirk-r ngathney*
1SG(NOM) wash-TR DO-PST.PFV 1SG.REFL
'I washed myself.' [GJ25Oct2002, Elicitation]
- (2) *ngay yup ngathnay rinth-e-nha*
1sg(NOM) soon 1SG.REFL squeeze-REFL-SBJV
'I want to squeeze my [blackhead].' (Hall 1972: 121)

Indeed, due to the frequent repetition of noun phrases noted above, it is not unusual for the same reflexive pronoun to appear more than once in the same clause, with or without a co-occurrent verbal reflexivizer, as in (3).

- (3) *nhul nhangnul nhaanhath-e nhangnul koowmiing*
3SG(NOM) 3SG.REFL look.at-REFL:NPST 3SG.REFL face(ABS)
'he is looking at his face (in a mirror).' (Hall 1972: 379)

The combination of Kuuk Thaayorre's flexible constituent order, the ambivalent transitivity of reflexive clauses (§3.1), the frequent apposition of coreferential noun phrases, and /or argument ellipsis, makes it difficult to establish whether reflexive pronouns occupy subject, object or oblique position. Their formal resemblance to the nominative case personal pronouns might suggest they are apposed to the subject argument. However, this is insufficient reason to posit Kuuk Thaayorre as an exception to the strong typological tendency for reflexive pronouns to fill the object or oblique position.

2.3 Self-intensifier pronouns

Kuuk Thaayorre intensifier pronouns are formed by the reduplication of the nominative case form of the corresponding personal pronoun plus suffixation of a rhotic (either a retroflex approximant or tap/trill, depending on the pronoun).

⁴In (1), *rirk* is a light verb frequently used with English loan verbs.

These pronouns do not encode reflexivity as such. However, events that are described by means of reflexive clauses in other languages may be described by clauses including a self-intensifier pronoun in Kuuk Thaayorre. In particular, self-intensifiers may be used to stress the lack of involvement of any external agent in ('extroverted') events that typically involve transfer of energy. For example, (4) was uttered in the description of an elicitation video stimulus that presented a piece of cloth spontaneously tearing down the middle, as if by magic (note: the translation is given in the original speaker's own words).

- (4) *mimp ith nhulnhulr thaariic-r*
cloth(ABS) that 3SGEMPH tear-PST.PFV
'that piece of material is tearing up itself.' [EN03Dec2002, Elicitation]

While the inanimate piece of cloth does not truly act upon itself in a canonical reflexive sense, it is notable that the speaker employs a reflexive clause in her English description of the same clip.

3 Verbs

The primary means of coding reflexivity are the reflexive pronouns (introduced above; §2.2) and the verbal reflexivizer (§3.1). However, self-directed actions may be also encoded by reciprocal morphology (§3.2) and both non-reflexive and inherently reflexive verbs (§3.3).

3.1 Verbal reflexivizer

The Kuuk Thaayorre reflexive voice marker (or "reflexivizer") takes the form of a derivational suffix with allophones *-e* and *-ey*. It occupies the same position in the verb as the reciprocalizer and valency-increasing morpheme, immediately following the verb root (plus verbalizer, for denominal verbs), as in (5).⁵

- (5) *yuur yak-ey-r*
hand(ABS) cut-REFL-PST.PFV
'[she] cut [her] hand.' [EF15Dec2002, Elicitation]

⁵Note that the body part apposition construction, in which the body part *yuur* 'hand' is here apposed to the whole/possessor/subject in the same case, is analogous to the 'external possession' constructions of other languages. This construction is considered further in §4.3.

The reflexivizer must precede any tense/aspect/mood inflection and, where present, the associated motion suffixes. The reflexivizer and valency-increasing morpheme may combine in either order (6), but the reflexivizer and reciprocalizer do not co-occur in the same verbal word (see Gaby & Kuuk Thaayorre language experts 2017: 292–300).

- (6) *ngay ngathney mungka-n-ey-r merrethen*
 1SG(NOM) 1SG.REFL consume-V[^]-REFL-PST.PFV medicine(ABS)
 ‘I made myself swallow the medicine.’ (Hall 1972: 392)

The effect of reflexive derivation on clausal transitivity is not straightforward. In transitive clauses, a subject NP receives ergative case-marking. Following reflexivization, this subject NP is typically in unmarked absolutive case, as in (7).

- (7) *kuta ngith pathath-e*
 dog(ABS) that bite:RDP-REFL:NPST
 ‘that dog is biting himself’ [AC21Aug2002, Conversation]

However, in other cases the ergative marking is retained. This is usually the case when the clause includes an overt object (as in 8) or instrument (as in 9).⁶

- (8) *John-i yuur theerng-ey-r*
 John-ERG hand(ABS) hit-REFL-PST.PFV
 ‘John hit himself on the hand.’ [GJ11Jan2004, Elicitation]
- (9) *John-i yuur-u theerng-ey-r*
 John-ERG hand-ERG hit-REFL-PST.PFV
 ‘he hit himself with [his own] hand.’ [GJ11Jan2004, Elicitation]

However, it is not as simple as the presence/absence of an overt object argument determining the presence/absence of ergative marking on the subject. In examples like (10), the subject is in absolutive case in spite of the presence of an absolute-case object NP, *yiin* ‘itch’.

- (10) *kuta ith yiin=p pathath-e*
 dog(ABS) that itch(ABS)=PRAG bite:RDP-REFL:NPST
 ‘that dog keeps biting itself.’ [AC21Aug2002, Conversation]

⁶Note that instrumental adjuncts also receive ergative case-marking in Kuuk Thaayorre.

Mixed indicators of transitivity are found in reciprocal as well as reflexive clauses in Kuuk Thaayorre and many other Australian Aboriginal languages, as discussed in detail by Evans et al. (2007). “Optional ergativity” – i.e. the ergative marking of some intransitive subjects and/or lack of ergative marking of some transitive subjects – is also a broader feature of Kuuk Thaayorre grammar (see Gaby 2008b, 2010).

3.2 Verbal reciprocalizer

The reciprocalizer, *-rr*, occurs in the same position in the verb as the reflexivizer (§3.1). While it primarily functions to encode symmetric (“reciprocal”) events, such as (11), the verbal reciprocalizer is also found in the description of self-directed (“reflexive”) events, such as (12–13).⁷

- (11) *Harry pul Micki-n melnkelnkarr nhaath-rr-nan*
Harry DU(NOM) Micky-ERG tomorrow see-RECP-GO&
‘Harry and Micky will see each other tomorrow.’ [EF15Dec2002,
Elicitation]
- (12) *peln nhangnma koowmiing reepon-rr-nam*
3PL(NOM) 3SG.ABL face(ABS) hide-RECP-P.IPFV
‘they were hiding their faces from him.’ (Hall 1972: 392)
- (13) *iirra thakrwuthurr yarr meer-en-rr-nan pam pork-a*
to.there promptly go-IMP show-RECP-GO& man big-DAT
‘go and report to the boss immediately.’ (Foote & Hall 1992: 333)

Further, a number of lexicalized, semantically reflexive verbs exhibit what appears to be a relic of the verbal reciprocalizer. Compare, for example, *wothoth* ‘wipe’ versus *wothothrr* ‘wash oneself’, or *puunm* ‘ pity’ versus *puunmr* ‘grieve’ (Foote & Hall 1992: 310). §5 describes the range of self-directed actions marked by the reciprocalizer.

3.3 Non-reflexive and inherently reflexive verbs

Introverted verbs expressing autopathic actions are typically expressed by non-reflexive clauses. For example, descriptions of dressing are never marked by either the pronominal or verbal reflexivizer, but rather by means of the verb *rok*

⁷Note that (13) involved a trivalent verb, where the reciprocalizer binds the direct object, what is shown, rather than the recipient, to whom it is shown.

‘enter’. In its basic usage, this verb’s argument structure comprises an intransitive subject (encoding the theme) and dative-marked oblique argument (encoding the goal), as seen in example (14) below. In descriptions of dressing and adornment, however, the agent-theme is encoded as intransitive subject (in nominative/absolutive case) but the article of clothing/adornment is encoded as direct object (in absolute case). This verb is used even in cases such as (15), where the agent-subject does not truly ‘enter’ the glasses in the way that one enters a dress or coat.

- (14) *hall-ak ulp=okun rok-nhan*
 hall-DAT DEM:ADR.PROX=DUB enter-GO:NPST
 ‘they might go into the hall [in a cyclone].’ [GJ03Apr2004, Conversation]
- (15) *nhul meer+kay rok-r*
 3SGNOM eye+metal(ABS) enter-PST.PFV
 ‘he put on glasses.’ [GJ18Jan2004, Elicitation]

In conservative varieties of Kuuk Thaayorre, autopathic events of washing are described by means of the non-reflexive compound verbs *koo+munth* ‘wash one’s own face’ (cf. *koow* ‘nose, upper face’, *munth* ‘sink’) and *minc+munth* ‘wash oneself’ (cf. *minc* ‘body’). Younger speakers, however, commonly employ the English loan *wash* (paired with the light verb obligatory for loan verbs) and a reflexive pronoun, as in (1) above. Kuuk Thaayorre possesses several “inherently reflexive” verbs; extroverted and introverted verb roots ending in /e/, which is likely a frozen relic of the verbal reflexivizer. For example, *koope* ‘wait’; *kongke* ‘copulate’ (Foote & Hall 1992: 218); *ngaathe* ‘feel, experience’; and *wene* ‘become’.

4 Reflexive functions

Across all its uses, the reflexive pronoun marks that the agent-subject is affected by their own actions. No such monosemous definition is available for the verbal reflexivizer, which spans a range of functions as outlined below. The reflexive pronoun appears with many of these functions, too, but always contributing the meaning that the agent is affected by their own actions. We begin in §4.1 with a consideration of the core reflexive function; indicating coreference of agent-subject and patient. We then move to consider cases of coreference between the agent-subject and three different oblique argument roles; the beneficiary/maleficary (§4.2.1), causer (§4.2.2), and recipient (§4.2.3). §4.3 details the reflexive coding of events in which the agent-subject moves their whole body, or acts

upon one body part in particular. §4.4 considers the use of reflexive marking to emphasize that the agent-subject is intensely involved in and/or affected by the action they take. §4.5 surveys the passive-like function of reflexive marking to foreground an affected patient (in the absence of any syntactic passive operation). Lastly, §4.6 demonstrates the use of reflexive morphology to encode apparently reciprocal events.

4.1 Coreference of agent-subject and patient

Under the working definition of reflexivity adopted here, the core function of reflexive marking is to indicate coreference of the two argument roles that would map to the subject and direct object of the non-reflexivized verb respectively. Thus, in example (16), the one man both touches and is touched, and in (17) the one man both pities and is pitied.

- (16) *nhul yarryi katp-ey-r, iitharrkoo, kam inh!*
3SG(NOM) thus grasp-REFL-PST.PFV wow blood DEM:SP.PROX
'he touched himself like this [and realized] "hey, there's blood here!"'
[GJ03Feb2004, Narrative DarwinTrip]
- (17) *nhangnul puunm-rr-r*
3SG.REFL pity-RECP-PST.PFV
'[he] pitied himself' (Foote & Hall 1992: 310)

This subject-object coreference may be coded by the verbal reflexivizer (16), reflexive pronoun (22 below), both (2 above) or some other combination of markers, such as reflexive pronoun plus verbal reciprocalizer (17).

4.2 Coreference of agent and an oblique role

4.2.1 Agent + beneficiary/maleficiary

As well as signalling the coreference of agent and patient arguments, the reflexive pronoun may be used to indicate that the agent-subject is also the beneficiary of their own action. This function, illustrated by example (18), is only attested for the reflexive pronoun, not the verbal suffix.

- (18) *ngay ngok mi'irr ngathaney*
1SG(ERG) water(ACC) pick.up.PST.PFV 1SG.REFL
'I got myself some water.' (Hall 1972: 379)

Attribution of the converse maleficiary role to the agent-subject may likewise be indicated by the pronominal, but not verbal, reflexivizer, as shown in (19).

- (19) *plate ulp nhangnul thiika-rr*
 plate(ACC) DEM:ADR.PROX 3SG.REFL break-PST.PFV
 '[that kid] broke his own plate.' [GJ12Jan2004, Elicitation]

On first glance, the reflexive pronoun in (19) might be thought to mark the agent-subject as the possessor of the patient, rather than a negatively-affected maleficiary. However, the coreference of agent-subject and possessor of the patient-object is not signalled by reflexive marking where the agent is not also beneficiary or maleficiary. Such possessors are encoded by the standard genitive pronouns, as in (20).

- (20) *pamthaaw nhangn kaar nhaawr nhul?*
 friend 3SG.GEN(ABS) NEG see:PST.PFV 3SG(NOM)
 'didn't he see his friends?' (Hall 1972: 65)

4.2.2 Agent + causer

The Kuuk Thaayorre valency-increasing morpheme (glossed v[^]) makes intransitive verb roots transitive and transitive verb roots ditransitive by adding an argument with a semantic role determined by the verb root. Where it is a causer that is introduced, the causer (now encoded as subject) may be marked as coreferential with the causee-agent by means of the verbal reflexivizer, as in (21).

- (21) *ngay ngathney mungka-n-ey-r merrethen*
 1SG(ERG) 1SG.REFL consume-V[^]-REFL-PST.PFV medicine(ACC)
 'I made myself swallow the medicine.' (Hall 1972: 392)

4.2.3 Agent + recipient

My corpus contains no examples of the verbal reflexivizer being used to mark coreference of agent-subject and recipient. This is a function generally achieved by means of the reflexive pronoun, as seen in (22).

- (22) *nhul nhangnul riiranmrr yik-r*
 3SG(NOM) 3SG.REFL alone say-PST.PFV
 'he talks [sic] to himself alone.' (Hall 1972: 503)

4.3 Body-part and whole body actions

Many reflexive clauses describe the agent-subject acting upon a part of their own body. There is thus only partial coreference of agent and patient arguments in examples like (23).

- (23) *pam-al ith koow katpatp-e*
man-ERG that nose(ABS) grasp:RDP-REFL:NPST
'that man is holding [his] nose.' [FT10Feb2004, RcpPilot8]

The body part may have the role of instrument (aligning with the agent), rather than patient, as seen in examples (8–9) above and (24) below. As with core reflexive clauses, the partial coreference of agent and body part patient/instrument may be signalled by a range of forms (alone or in combination), including the verbal (23) and pronominal (24) reflexivizers.

- (24) *parr-an nhul yangkar wiiyth thaa+rinthi-rr*
child-ERG 3SG(NOM) leg(ABS) sore(ABS) mouth+squeeze-PST.PFV
yuur-u nhangnul
hand-ERG 3SG.REFL
'the boy squeezed himself on the leg with his finger.' (Hall 1972: 379)

Events which may be framed as an agent's reflexively acting upon their own body part in other languages are instead expressed via same-case apposition of the noun phrases representing whole and part in Kuuk Thaayorre. Thus in (25), both the whole dog (as agent) and his head part (as theme) are encoded by distinct noun phrases in the nominative case assigned to the subject of *rok* 'enter' (see §3.3 for further discussion of this verb). (For a detailed description of part-whole apposition in Kuuk Thaayorre, see Gaby & Kuuk Thaayorre language experts 2017: 237–240).

- (25) *kuta nhul paant glass-ak rok-r*
dog(NOM) 3SG(NOM) head(NOM) glass-DAT enter-PST.PFV
'the dog put his head into the jar.' [MF17Sep2002, Narrative FrogStory]

Actions affecting a body part are not always clearly distinguishable from actions affecting the whole body. For example, the subject participant of (16) above only touched one part of himself (his arm), but this body part was not explicitly mentioned. In other cases, such as (26), it is clearly, though implicitly, the agent's whole body that is affected by their action.

- (26) *nhunt koorkorr thaat pirk-rr ngathun*
 2SG(NOM) behind:RDP wide push-RECP:IMP 1SG.DAT
 ‘move yourself along there a bit for me.’ (Hall 1972: 446)

4.4 Intensification/affected agent

The etymological connection between self-intensifiers and reflexive pronouns has been well documented (Faltz 1985; König & Siemund 2000), though we have already seen that the Kuuk Thaayorre reflexive pronouns are distinct from the paradigm of self-intensifier pronouns (§2.2 and §2.3). The verbal reflexivizer, however, can be used with an effect of intensification. Compare, for example, (27) below with the English reflexive expression ‘to eat oneself sick’.⁸

- (27) *nhunt thaaw+murm paath-ey-r may-im*
 2SG(NOM) mouth+sink bite-REFL-PST.PFV VEG-ABL
 ‘You really hogged into that food [i.e. ate greedily] you did.’ (Hall 1972: 504)

4.5 Medio-passive

Unsurprisingly, given the ergative-absolutive case frame of noun-headed NPs and the free ellipsis of core arguments, Kuuk Thaayorre has no syntactic operation akin to a passive. However, the reflexive voice may be employed to foreground the affected patient in a passive-like construction (Geniušienė 1987; Kemmer 1993), as seen in examples (28–29).

- (28) *nhul Jesus werngka yongk-e-nham*
 3SG(NOM) Jesus(ABS) middle hang-REFL-PST.IPFV
 ‘Jesus was hanging in the middle.’ (Hall 1972: 137)
- (29) *yangan kaal-ak kath-ey-r*
 hair(ABS) ear-DAT bind-REFL-PST.PFV
 ‘[his] hair was tied over [his] ears.’ [GJ15Oct2002, Elicitation BowPed46]

Note that the (unmarked) absolute case form of *yangan* ‘hair’ in (29) permits two syntactic analyses. Under the first, *yangan* is the direct object representing the patient affected by the actions of some unmentioned agent (i.e. ‘[someone] tied [his] hair over [his] ears’). Under the second, *yangan* is either the intransitive subject, possibly in apposition to an elided NP representing the whole agent-subject (i.e. ‘[he] tied [his own] hair over [his] ears’).

⁸Generic nouns, such as *may* ‘vegetable food’ in (27), are glossed in small caps.

4.6 Reciprocal use of the reflexivizer

Where a reflexive-marked verb combines with a non-singular subject, it is not necessary that both agent and patient roles be ascribed to each participant encoded as subject, it is sufficient that just one participant is both agent and patient of the action described. Example (30), for instance, could describe a single woman painting both herself and her sister, according to the language expert consulted.

- (30) *ngali muul-thurr werk-ey-r*
1DU:EXCL(NOM) white.ochre-ERG rub-REFL-PST.PFV
'we two painted ourselves and/or each other with white ochre.'
[EF15Dec2002, Elicitation – modelled on Hall 1972]

This 'collective reflexive' usage may be a bridging context for the use of the verbal reflexivizer to describe apparently reciprocal events, such as (31–32).⁹ In these events, while each subject participant is both agent and patient of the action described, they are not patient of the same subevent of which they are agent. That is to say, they do not act upon themselves, but rather one another. In (31), for example, each of the two people encoded by the dual subject pronoun leans upon the other, not upon him/herself.

- (31) *pul mut-u thaayoooyongk-e*
3DU(NOM) back-DAT lean:RDP-REFL:NPST
'they are leaning (on each other) back to back.' [FT10Feb2004, Elicitation RCP12]
- (32) *pul runc-ey-r*
DU(NOM) impact-REFL-PST.PFV
'they two collided with one another.' [FT10Feb2004, Elicitation RCP22]

Such events typically receive reflexive marking only where one or more of the following conditions are met: (i) there is close physical contact between participants, or intimate non-physical contact (such as staring into one another's eyes); (ii) participants synchronize or closely coordinate their actions; (iii) there is a blurring of roles (it is unimportant and/or unspecified which of the subject participant(s) play the roles of agent and/or patient). For further examples and discussion see Gaby (2011).

⁹The verb root *runc* in (32) denotes a broad range of events of impact, including stabbing, kicking, crushing, falling to the ground, and more.

5 Self-directed actions marked by the reciprocalizer

As mentioned in §4.5, the verbal reflexivizer may appear in clauses in which an external agent is backgrounded, unimportant or absent. It is perhaps for this reason that self-directed events in which the agent-subject acts upon themselves with unexpected or heightened agency are marked by reciprocal, rather than reflexive, voice marking on the verb. For example, a woman's breaking her foot by accidentally treading in a hole or knocking a heavy object onto it might be described by means of the verbal reflexivizer. But a woman taking her foot in her hands and deliberately breaking it is described by pairing the verbal reciprocalizer with the reflexive pronoun, as shown in (33).

- (33) *paanth-u thamr nhangnul thiik-rr-r*
 woman-ERG foot(ABS) 3SG.REFL break-RECP-PST.PFV
 'the woman broke her own feet.' [GJ11Jan2004, Elicitation]

Similarly, a typical event of falling or lying down would be described by intransitive verb forms such as *wont* 'fall' or *wun* 'lie', but a pragmatically unusual event of throwing oneself to the ground receives reciprocal marking paired with the reflexive pronoun, (34).

- (34) *nhunt nhangknunt thunp-rr ii-rr-kop raak-un*
 2SG(NOM) 2SG.REFL throw-RECP:IMP there-towards-below ground-DAT
 'throw yourself down onto the ground!' (Foote & Hall 1992: 360)

It is possible that revealing one's own weaknesses (as in 35) is more unusual than pointing out the weaknesses of others. However, in the Bible translation work conducted by Allen Hall and Tom Foote (on which Hall's two theses and Foote & Hall 1992 were based), at least, the reciprocal verb stem *kunanpunrr* is relatively high frequency, with meanings including 'testify', 'repent', 'confess', 'admit', and 'give an account of'.

- (35) *ngamp yiirryirram nhanganul kunanpun-rr-nan nhangun*
 1PL:INCL(NOM) severally 3SG.REFL reveal-RECP-GO&:NPST 3SG.DAT
 'We each will give an account of ourselves to Him.' (Hall 1972: 392)

It may not be possible to motivate each instance of reciprocal marking of self-directed events in terms of pragmatic unusualness, as some such verb stems (such as *kunanpunrr*) seem at least partially lexicalized.

Example (35) is interesting for another reason. It was mentioned in §2.2 that reflexive pronouns – which are exclusively singular in number – may combine

with non-singular subject NPs. In (35), the plural subject pronoun (*ngamp* ‘we’) combines with a singular reflexive pronoun (*nhangnul* ‘him/herself’) to stress that each participant is both agent and patient of a single subevent. The inclusion of the reflexive pronoun is necessary not only to stress the strict, individual self-directness of the event described, but also to differentiate the intended reflexive reading from the basic reciprocal meaning suggested by the verbal morphology.

See Gaby (2008a, 2011) for a more detailed consideration of the relationship between the verbal reflexivizer and verbal reciprocalizer and the events they encode.

6 Kuuk Thaayorre in context

The forms and functions of reflexive marking in Kuuk Thaayorre are not unusual in the local typological context. Among Australian Aboriginal languages, it is commonplace for verbal reflexivizers to be highly polysemous, frequently including reciprocity within their semantic range (Gaby 2023). It is likewise common for a reflexive pronoun to optionally combine with a verbal reflexivizer to force a strictly reflexive interpretation. These similarities are not attributable to shared inheritance, however. Though a proto-Australian “reflexive/intransitivizer suffix” with the form **-DHirri-y*¹⁰ was proposed by Dixon (1980: 447), a common ancestor to Australia’s 250+ Indigenous languages remains elusive and controversial (see, e.g., Harvey & Mailhammer 2017). The Kuuk Thaayorre verbal reciprocalizer, *-rr*, might be a reflex of **DHirri-y*, along with any number of synchronic reflexive and/or reciprocalizers that include the tap/trill segment (for example Arrernte *-rre*; Bāgandji *-dhirri*; Bininj Gun-Wok *-rr*; Djabugay *-nydyirri*; Jiwarli *-rri*; Martuthunira *-yarri*; Panyjima *-rri*; Rembarrnga *-rroe*; Wirangu *-ri*). So too might the Kuuk Thaayorre verbal reflexivizer, *-e*, ultimately derive from the high vowel + palatal glide at the end of Dixon’s reconstructed form, along with reflexive morphemes in other Australian languages which take the form of a high front vowel/glide (for example, Bunuba *-iy*; Djabugay *-yi*; Guugu Yimidhirr *-yi*; Kunbarlang *-yi*; Ndjébbana *-yi*; Ngandi *-i ~ -yi*). In the absence of a detailed account of sound change and genealogical relatedness of the relevant languages, though, there is insufficient support for asserting the cognacy of these mono- or bi-segmental morphemes.

The etymological source of the Kuuk Thaayorre reflexive pronoun is more transparent. As outlined in §2.2, these pronouns are formally related to both the nominative-form personal pronouns and the genitive pronominal paradigm. This

¹⁰The digraph ‘DH’ here represents a laminal stop at either dental or palatal place of articulation.

may suggest an original bridging context in which the agent-subject encoded by the nominative-form pronoun acts upon a part or the whole of their body, encoded (at least in part) by the genitive pronoun, or in which the agent-subject is coreferential with the recipient/beneficiary/maleficiary of their action, coded as possessor. Unlike other reflexive pronouns (both in Australia and beyond), the contrast with a distinct set of self-intensifier pronouns rules out the latter as an etymological source. The Kuuk Thaayorre reflexive pronouns are also notable for their being limited to singular number, apparently linked to their strictly entailing that each agent-subject participant acts upon him/herself individually.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

DEM:ADR.PROX	addressee-proximal adnominal demonstrative	GO& NPST	associated motion verbal suffix nonpast
DEM:SP.PROX	speaker-proximal adnominal demonstrative	P.IPFV P.PFV PRAG	past imperfective past perfective pragmatic enclitic
EMPH	emphatic	RDP v^	reduplicated valence increasing suffix

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Chapter 23

Reflexive constructions in Warlpiri

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Warlpiri is an Australian language which belongs to the Ngumpin-Yapa subgroup of Pama-Nyungan. Coreference between the subject and another argument of a finite clause – object or applicative – is marked by an anaphoric clitic in the auxiliary complex substituted for the person/number and case-marking clitic that would mark features of the corresponding non-subject argument disjoint in reference with the subject. Evidence that reflexive clauses with transitive verbs maintain their transitivity includes ergative case-marking of subject NP and the association of a part NP with the non-subject role. Formally similar pseudo-transitive reflexive clauses which express a change of state in a single argument are shown to be limited to situations in which the internal state of a being is altered by some external situation beyond that being's control. The role of the anaphor within complex NPs is compared with its role within the finite clause. Within a finite clause a strict coreference relation is limited to that between the subject and the non-subject role represented by the anaphor. Strict coreference between an argument of a matrix finite clause and an argument within a non-finite clause embedded within the finite clause is limited to the phonologically null subject of the non-finite clause. Given the lack of an anaphor in non-finite clauses, strict coreference between subject and object cannot be expressed. Where coreference is possible between an NP external to a non-finite clause and a pronoun internal to it, a disjoint reading is always available.



1 Introduction

1.1 Classification, distribution and dialects of Warlpiri

Warlpiri is one of the best documented Australian languages and is also one of the few indigenous Australian languages still being acquired by children.¹ According to the 2016 Australian Census, 2,276 people indicated that they spoke Warlpiri at home.

The traditional Warlpiri heartland is in the Tanami Desert in Australia's Northern Territory, see Figure 1². The language most closely related to Warlpiri is Warlmanpa, which borders Warlpiri on the northeast. These two languages, Warlpiri and Warlmanpa, form the Yapa branch of the larger Ngumpin-Yapa group of languages traditionally spoken on territory extending north and west from Warlpiri and Warlmanpa land (McConvell & Laughren 2004; Meakins et al. 2022). Warlpiri is the southernmost member of the Ngumpin-Yapa group of languages which belong to the large Pama-Nyungan language family spoken over most of the continent. However, along their northern border, Ngumpin languages are in direct contact with non-Pama-Nyungan languages (see Dixon 2002; Evans 2003).

Several dialects of Warlpiri can be identified reflecting to some extent the languages of neighbouring communities. These dialects vary mainly in vocabulary, with some minor phonological and grammatical differences which do not impact on the phenomena described herein.³

Some elementary facts about Warlpiri clause structure and morphology and the role and form of NPs are presented in §1.2. The remaining sections are organised as follows: §2 sets out the pronominal system and the relationship between “free” pronouns and the markers of person and/or number in the auxiliary complex and the role of the anaphoric non-subject enclitic central to the reflexive construction in finite clauses; §3 explores a range of relationships within finite reflexive clauses, while NP-internal reflexive relationships are discussed in §4; constraints on coreference within non-finite clauses are briefly discussed in §5; some uses of formal reflexive structure in clauses with monadic predicates are touched on in §6; the Warlpiri reflexive construction is placed in a wider Australian context in §7.

¹See the bibliography of work on Warlpiri created and maintained by David Nash at <http://www.anu.edu.au/linguistics/nash/aust/wlp/wlp-lx-ref.html>.

²The map was originally drawn by Brenda Thornley in 2017.

³The language described herein is traditional Warlpiri which is quite distinct from the variety dubbed “Light Warlpiri”, which has developed among younger speakers at Lajamanu (O'Shannessy 2005, 2006, 2013).



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Figure 1: Warlpiri and Ngumpin-Yapa languages in relation to non-Pama-Nyungan Mirndi languages, based on Meakins et al. (2022)

1.2 General remarks on Warlpiri morphosyntax

1.2.1 Clause structure

Warlpiri finite and non-finite clauses are quite distinct in structure. The core constituents of a finite clause are the auxiliary and the predicate; the latter may be verbal (1a)⁴ or nominal (1b).⁵

- (1) a. *Nya-ngu=lu=jana.*
see-PST=PL.S=3PL
'They saw them.'

⁴Suffix boundaries are marked by “-” and enclitic boundaries by “=”. The subject clitic is glossed “s”, but the grammatical function of the non-subject clitic is not glossed as it may mark the person and/or number and case features of several non-subject grammatical functions (discussed in some detail in §2).

⁵Unless otherwise indicated, the source of the Warlpiri sentences is the author’s field notes and recordings.

- b. *Jaja=rna=ngku.*
grandmother=1s=2
'I am grandmother to you.'

In verbal clauses, the auxiliary consists of one of two base morphemes: *ka* 'present indicative' only with the non-past verb form as in (3a–3b), and *lpa* 'imperfective' with past and unrealis verbal inflections as in (11a–11b). Each of these contrasts with its absence, as in (1a). A "zero" base is compatible with all verbal inflections and is obligatory with a non-verbal predicate as in (1b). The TAM properties of a clause are marked by the auxiliary base in conjunction with verbal inflectional suffixes, and with a complementiser to which, if present, the auxiliary encliticises, as in (5a).

Subject and non-subject enclitic pronouns attach to the auxiliary base (Hale 1973). The auxiliary complex typically follows the clause-initial phrase, which may be of any category. Where the auxiliary base is phonologically null, as in (1a–1b), the pronominal enclitics attach directly to the clause initial phrase.⁶

In a clause with an overt complementiser, the auxiliary complex must enclitise to the complementiser; this combination may occupy initial or second position in the clause. The choice of clause initial phrase is mainly determined by discourse factors (see Swartz 1991; Mushin & Simpson 2008), although the presence of the negative complementiser *kula* excludes the inflected verb from the clause initial position. In finite clauses with a nominal predicate, there is no auxiliary base, or complementiser, so the pronominal clitics attach to the clause initial phrase as in (1b) in which the combination of subject clitic =*rna* and dative clitic =*ngku* encliticise to the nominal kin predicate *jaja* 'mother's mother'. Clauses with a nominal predicate lack markers of TAM features and have a present or aorist interpretation. To overtly express TAM values, a copula-like "stance" verb must be added which converts the clause from a nominal one to a verbal one.⁷

Non-finite clauses, like finite clauses with a nominal predicate, lack TAM markers and have no auxiliary base. They also lack enclitic pronouns, which has implications for the expression of coreference. In this respect, Warlpiri differs from Western Romance languages in which accusative and/or dative person and num-

⁶3rd person subjects are unmarked. The clitic =*lu* in (1a) marks a plural subject and may combine with 1st or 2nd person subject clitics. The dual clitic =*pala* works the same way. While some clitics (such as =*jana* in 1a) mark both person and number features as well as case, others only mark features of either person or number – not both. Where only person features are marked, the absence of accompanying number marking typically defaults to a singular reading. Hale (1973) provides a full account of Warlpiri person and number marking clitics.

⁷For more detail on basic clause structure in Warlpiri see Hale (1982).

ber marking clitics including an anaphoric clitic occur in both finite and non-finite clauses. Unlike a nominal, a bare infinitive verb cannot function as the main predicate of a finite clause; it must host a complementiser suffix which signals the relationship between the non-finite clause and other constituents of the matrix finite clause in which it is embedded (see Hale 1982; Simpson & Bresnan 1983; Nash 1986; Simpson 1991; Laughren 2017, *inter alia*).

1.2.2 Noun phrases

Warlpiri noun phrases are case-marked. Case is marked by a suffix (or its absence) which is obligatory on the final word of a phrase, although other words in a phrase may also be case-marked. In finite clauses, NPs whose number and person features are encoded by the subject pronominal enclitic are either marked by the ergative grammatical case suffix, e.g. *karnta-ŋku*, as in (2b–2d), or they are unmarked, e.g. *karnta* (3b), depending on the verb.⁸ In finite nominal clauses, the subject NP is always unmarked. Similarly, NPs whose number and/or person features are marked by the non-subject pronominal enclitic are either unmarked, e.g. *wati* ‘man’ in (2b–2d) or marked with dative case, e.g. *wati-ki* in (3b).⁹ Features of Warlpiri syntax that have been widely discussed in the linguistic literature are the grammatical optionality of NPs corresponding to the predicate’s arguments, and the relative lack of constraints on word and phrase order, especially within finite clauses (e.g. Hale 1983; Jelinek 1984; Nash 1986; Simpson 1991; Laughren 2002; Legate 2002; Mushin & Simpson 2008; *inter alia*).¹⁰ These features are illustrated by the contrast between (2a) and (2b–2d) and between (3a–3b), and in other examples herein. Sentences (2b–2d) have the same sense with the varying order of phrases determined by discourse context.

In the sentences in (2–3) the subject and object NPs refer to distinct entities.

- (2) a. *Nya-ŋgu=lu=jana*.
 see-PST=PL.S=3PL
 ‘They saw them.’

⁸The unmarked subject or object NP is traditionally said to be in the absolute [ABS] case. In glossing Warlpiri examples, I omit this feature since it is redundant.

⁹Legate (2002) argues that the dative-marked object of verbs like *wangka-mi* ‘speak, talk’ is a “low” applicative internal to the inner VP like the unmarked object of verbs with an ergative subject although in a different relationship to the verb. This “low” object-like applicative contrasts with the “upper” applicative generated above the inner VP but inside the higher vP. Simpson (1991) also distinguishes these grammatical functions within an LFG framework.

¹⁰See also Pensalfini (2004) for relevant discussion.

- b. *Karnta-ngku=lu=jana wati nya-ngu.*
woman-ERG=PL.S=3PL man see-PST
- c. *Nya-ngu=lu=jana wati karnta-ngku.*
see-PST=PL.S=3PL man woman-ERG
- d. *Wati=li=jana karnta-ngku nya-ngu.*
man=PL.S=3PL woman-ERG see-PST
'The women saw the men.'

With ditransitive verbs such as *yinyi* 'give', it is typically the animate recipient whose person and/or number features are marked by the non-subject enclitic pronoun while a co-referential NP is marked with dative case as in (4a). However, where the theme argument has an animate referent, its features are marked by the enclitic non-subject pronoun, and an NP referring to it is unmarked. The recipient NP is no longer marked by dative case, but is expressed in an optional phrase headed by a semantic case, the allative, as in (4b).¹¹ The person/number features of this allative phrase are not marked by an enclitic pronoun.

- (3) a. *Wangka-mi ka=lu=jana.*
speak-NPST PRS.IND=PL.S=3PL
'They are speaking to them.'
 - b. *Wati-ki ka=lu=jana wangka-mi karnta.*
man-DAT PRS.IND=PL.S=3PL speak-NPST woman
'The women are speaking to the men.'
- (4) a. *Kuyu kapu=ju=lu yi-nyi ngaju-ku.*
meat FUT=1=PL.S give-NPST me-DAT
'They will give me meat.'
 - b. *Kapu=ju=lu ngaju yapakari-kirra / *yapakari-ki yi-nyi.*
FUT=1=PL.S me other-ALL / *other-DAT give-NPST
'They will give me up to another.' [betray] [Warlpiri Bible, Matthew 17.22]

¹¹Suffixes such as the allative 'to, towards' which behave rather like the heads of prepositional or postpositional phrases will be referred to herein as "semantic cases". Nash (1986) classes them as "cases" which contrast with the "grammatical cases" in his ARG[ument] category. While a phrase marked by a semantic case may be further marked by a grammatical case (dative or ergative) suffix, the converse is not possible. See Simpson (1991) and Legate (2008) for detailed analyses of case in Warlpiri.

The non-subject enclitic pronoun also marks the person and number features of an applicative argument, such as the benefactive arguments in (5a–5b). If present, an NP coreferential with the non-subject clitic is also marked by dative case, as exemplified by *jirrima-kari-ki* in (5a).¹²

- (5) a. *Yinga=palangu_i jint-a-kari-rli yangka kuyu jirrima-kari-ki_i ngayi paji-rni.*
COMP=DU one-other-ERG that meat two-other-DAT BEN cut-NPST.
'So that the other person cuts up that meat for the other two.'
- b. *Kapu=rna=ngku kaji panti-rni.*
FUT=1s=2 BEN spear-NPST
'I will spear (it/him/her) for you.'

NPs whose number features are not marked by pronominal enclitics, i.e., which are neither subject, object or applicative arguments, are typically marked by a case suffix with a complementising function such as the purposive *ngapa-ku* in (6a), marked by dative case, or a semantic case suffix such as the allative in (6b) or elative in (6c).¹³

- (6) a. *Ngapa-ku ka=rna ya-ni.*
water-DAT PRS.IND=1s go-NPST
'I am going for water.' (i.e., to get water)
- b. *Ngapa-kurra ka=rna ya-ni.*
water-ALL PRS.IND=1s go-NPST
'I am going to/towards the water.'
- c. *Ngapa-ngurlu ka=rna ya-ni.*
water-ELAT PRS.IND=1s go-NPST
'I am going from the water.'

Warlpiri lacks an article category but has an extensive set of determiners which may constitute an NP or combine with other nominal words in a complex NP. Determiners host the same set of case suffixes as other nominals.

¹²Simpson (1991) dubbed this class of applicative “external object” while Legate (2002) dubbed it “higher applicative” in contrast with “lower applicatives”, i.e., Simpson’s “dative objects”. Warlpiri has an array of adverbial preverbs such as benefactive expressed by dialect variants *kaji/ngayi* which specify how the dative-marked applicative argument’s role is interpreted (see also Hale 1982 and Nash 1986).

¹³The purposive phrase in (6a) marked by the dative case suffix differs from a dative object or applicative phrase in not being construed with a non-subject auxiliary pronominal enclitic.

2 Pronouns and anaphors

2.1 Pronouns

Warlpiri has two sets of pronouns: bound pronouns (auxiliary enclitics) and free pronouns which are set out in Table 1 (see Hale 1973). The former are obligatory in finite clauses, while the free pronouns behave like NPs in that their presence is not obligatory, but is determined by discourse factors. While the case-marking of the bound pronouns is Nominative vs Accusative/Dative, the free pronouns follow the same case-marking pattern as that of NPs. The non-subject pronominal enclitic has the same form irrespective of whether it marks the number and/or person features of an unmarked or dative-marked NP, except for the 3rd person singular which has a marked dative form, *-rla*, which contrasts with the phonologically null nominative and accusative, and a distinct “double dative” (DD) form. The DD form is used mainly when there is both a dative “object” and an “applicative” argument marked by the dative case suffix, or where there is one of these and an overt or implied purposive adjunct. The DD is formed by adding *=jinta* to the 3rd person dative enclitic *=rla*, but by adding *=rla* to all other non-subject enclitics. Unlike the other enclitic pronouns, the DD encodes no specific person or number features – it merely signals an additional clausal constituent marked by dative case.¹⁴

As stated above, the case-marking on free pronouns is basically the same as on nouns, except for the possessor form, which is *-kurlangu* on determiners, nouns and infinitives, *-nyangu* on pronouns. Exceptionally, as subject of a transitive clause, 1st and 2nd person singular pronouns may be either marked ergative, or left in their unmarked form. The presence of free pronouns coreferential with corresponding bound pronouns generally marks contrastive focus, or emphasizes a topic function. Note the contrast between (7a)¹⁵ with no free subject pronoun coreferential with the enclitic subject pronoun *=npa* and (7b) in which the presence of the ergative marked free pronoun *nyuntulu-rlu* stresses the speaker’s desire that the addressee execute the order. In (7c),¹⁶ spoken in one sequence, the contrastive focus on the addressee relative to the speaker is marked by the free pronoun *nyuntu* ‘you’ coreferential with the “object” enclitic *=ngku* in the first sentence and with the subject enclitic *=npa* in the second.

¹⁴In addition to the pronouns in Table 1, Warlpiri has a number of honorific addressee pronouns substituted for “standard” 2nd person pronouns in particular circumstances; 3rd person and plural forms may also be substituted for 2nd person singular ones. These special register forms are not relevant to the subject matter herein.

¹⁵HN59 indicates Hale fieldnotes with transcriptions of oral recordings made in fieldwork season 1959–60; HN66–67 those from 1966–1967.

¹⁶*Kurdiji-mardarnu* (lit. ‘shield-holder’) and *karli-parnta* (lit. ‘boomerang-having’) are figurative expressions for senior or upper generation kin and junior or lower generation kin respectively.

Table 1: Warlpiri pronouns

		Enclitic pronouns		
		Subject	Non-subject	
Free pronouns		NOM	ACC/ DAT	DD
1SG	<i>ngaju(lu)</i>	= <i>rna</i>	= <i>ju</i> , ^a = <i>ji</i>	= <i>rla</i>
13DU	<i>ngajarra</i>	= <i>rlijarra</i> , = <i>rlujarra</i>	= <i>jarrangku</i>	= <i>rla</i>
13PL	<i>nganimpá</i>	= <i>rna=lu</i>	= <i>nganpa</i>	= <i>rla</i>
12DU	<i>ngali(jarra)</i>	= <i>rli</i> , = <i>rlu</i>	= <i>ngalingki</i>	= <i>rla</i>
12PL	<i>ngalipa</i>	= <i>rlipa</i> , = <i>rlupa</i>	= <i>ngalpa</i>	= <i>rla</i>
2SG	<i>nyuntu(lu)</i>	= <i>n(pa)</i>	= <i>ngku</i> , = <i>ngki</i>	= <i>rla</i>
2DU	<i>nyumpala</i> , <i>nyuntu-jarra</i>	= <i>n=pala</i>	= <i>ngku=pala</i> , = <i>ngki=pala</i>	= <i>rla</i>
2PL	<i>nyurrurla</i> , <i>nyuntu-patu</i>	= <i>nku=lu</i> , = <i>nki=li</i> , = <i>npa=lu</i>	= <i>nyarra</i>	= <i>rla</i>
3DU	<i>nyanungu-jarra</i>	= <i>pala</i>	= <i>palangu</i>	= <i>rla</i>
3PL	<i>nyanungu-rra</i>	= <i>lu</i> , = <i>li</i>	= <i>jana</i>	= <i>rla</i>
		ACC	DAT	
3SG	<i>nyanungu</i>	∅	∅	= <i>rla</i> = <i>jinta</i>

^aThe distribution of *i* and *u* vowels in enclitic pronouns is determined by the preceding vowel: *i* following *i* and *u* following *u*. Following *a* there is dialectal variation; in eastern Warlpiri *a* is usually followed by *i*; in southern and western Warlpiri *a* is typically followed by *u*, although there is variation in the pronunciation of the 12 person subject pronouns.

- (7) a. *Kuntul-pi-nyi ka=npa yalyu-kurlu?*
cough-do-NPST PRS.IND=2s blood-with
‘Are you coughing up blood?’ [HN66–67]
- b. *Kuntul-pu-ngka wakurturdu-rlu nyuntulu-rlu!*
cough-strike-IMP strong-ERG 2SG-ERG
‘Cough (it) up strongly you!’ [HN66–67]
- c. *Nyuntu-ku ka=rna=ngku nyina kurdiji-mardarnu. Nyuntu*
you.SG-DAT PRS.IND=1s=2 sit.NPST senior you.SG
ka=npa=ju nyina karli-parnta.
PRS.IND=2s=1 sit.NPST junior
‘I am senior to you. You are junior to me.’ [HN66–67]

The 3rd person pronoun *nyanungu*, in its singular, dual and plural forms, may constitute an NP and may refer to animate or non-animate entities. In (8a) *nya-nungu* is the unmarked subject NP, its presence marking contrastive focus. This pronoun may also have a specific determiner function, as in (8b), in which it combines with *wawirri* ‘kangaroo’ to form a complex NP.¹⁷

- (8) a. *Kajika nyanungu wangka yangka jinta-kari.*
might 3SG say aforementioned one-other
'He might say – that other one (that is): [...]' [HN66–67]
- b. *Nyarrpara ka-npa nya-nyi kuja nyanungu=ju wawirri?*
Where PRS.IND=2S see-NPST that 3SG=TOP kangaroo
'Where is it that you can see that/this/the kangaroo (that you said you saw)' [HN66–67]

2.2 Anaphor and coreference

Warlpiri also has an anaphoric non-subject enclitic pronoun =*nyanu* used in both reflexive and, with dual or plural subjects, reciprocal constructions in finite clauses, as shown in (9a–9c).¹⁸ Its referential value is always that of the subject.¹⁹ It is used with all subject enclitics with the exception of 1st person singular (9b), and the 2nd person singular in imperative clauses (9d) in which the non-anaphor 2nd person non-subject enclitic is used. In non-imperative clauses with a 2nd person singular subject =*nyanu* must be used to signal coreference of an object or applicative with the subject as in (9c). The NPs in (9a) and (9d) are in parentheses to indicate their grammatical optionality.

- (9) a. *Nya-ngu=rna=lu=nyanu (nganimpa-rlu) (*nganimpa).*
see-PST=1S=PL.S=ANAPH (13PL-ERG) (13PL)
'We saw each other/we saw ourselves.'
- b. *Nya-ngu=rna=ju / *nyanu (ngajulu-rlu) / (ngaju(lu)).*
see-PST=1S=1 / *ANAPH (1SG-ERG) / (1SG)
'I saw myself'

¹⁷For an extensive discussion of reflexives and pronominal reference in Warlpiri, see Simpson (1991: §3.4) and Hale et al. (1995: §6).

¹⁸Evans et al. (2007: §3.1) details properties of Warlpiri reciprocal clauses which are applicable to the reflexive clauses discussed herein.

¹⁹Blake (1988) reconstructs *nyanu* as Eastern Pama-Nyungan feminine dative pronoun.

- c. *Nya-ngu=npa=nyanu / *ngku (nyuntulu-rlu) / (nyuntu(lu)).*
see-PST=2S=ANAPH / *2 (2SG-ERG) (2SG)
'You saw yourself.'
- d. *Nya-ngka=ngku / *nyanu ngapa-ngka (nyuntulu-rlu) / (nyuntu(lu)).*
see-IMP=2 / *anaph water-LOC (2SG-ERG) (2SG)
'See/look at yourself in the water.'

Warlpiri has no subject reflexive pronoun, either free or bound, nor does it have a free reflexive pronoun akin to English pronouns with the suffix 'self', or a form to mark long-distance anaphora (cf. Giorgi 2007). The non-subject enclitic forms coreferential with the subject are set out in Table 2.

Table 2: Reflexive/reciprocal enclitic pronouns and anaphor

ACC/DAT		
1	=ju, =ji	only with singular reference
2	=ngku, =ngki	only with imperative verb and singular reference
ANAPH	=nyanu	used with all other subject pronouns

Irrespective of the case frame of the verb in the clause, the identical anaphor form is used, including with unmarked 3rd person singular subjects, as in (10b) and (11b). The anaphor =nyanu in (10b) contrasts with a zero marked disjoint accusative object in (10a). A non-inflected object free pronoun (or other NP type) is grammatical in (10a) since it is referentially disjoint from the subject. In (10b) it is ungrammatical if coreferential with the subject as on the reading given.

- (10) a. *Paka-rnu wati-ngki_i (nyanungu_{*i/j}).*
hit-PST man-ERG 3
'The man_i hit him_{*i/j}/her/it.'
- b. *Paka-rnu=nyanu_i wati-ngki_i (*nyanungu_{i/j}).*
hit-PST=ANAPH man-ERG 3
'The man_i hit himself_{i/*j}'

In (11a) the dative enclitic =rla marks the 3rd person singular features of the dative object which must have disjoint reference from that of the subject. In (11b), the presence of the anaphor =nyanu signals coreference of the dative object with the subject. In both sentences a dative-marked free pronoun coreferential with the non-subject enclitic pronoun is optional. In (11b), it is also coreferential with the subject.

- (11) a. *Wangka-ja=lpa=rla^{*}i/j wati_i (nyanungu^{*}i/j-ku).*
say-PST=IPFV=3DAT man 3-DAT
'The man_i spoke to him^{*}i/j/her.'
- b. *Wangka-ja=lpa=nyanu wati_i (nyanungu_i/^{*}j-ku).*
say-PST=IPFV=ANAPH man 3-DAT
'The man_i spoke to himself_i/^{*}j.'

As noted above, the addition of the 3rd person free pronoun *nyanungu* to (10b) is ungrammatical on the interpretation given. However, on a disjoint reference reading between subject and object, and the anaphor *=nyanu* coreferential with the subject being interpreted as a dative applicative argument, (10b) would be grammatical and interpretable as 'The man_i hit that one^{*}i/j for himself_i/^{*}j'.

Unlike the verb's object which cannot be coreferential with an unmarked free pronoun as shown in (10b), the dative object or applicative can be expressed by both the bound anaphor *=nyanu* (signalling coreference with the subject) and an optional dative-marked free pronoun also coreferential with the subject. However, this is only possible in a clause in which the subject NP is unmarked, as in (11b). Where the subject NP is ergative-marked, coreference between subject and object – whether the latter is unmarked or dative – is ungrammatical. This contrast is illustrated in (12).

In (12a), which is grammatical, the subject NP *Jakamarra* is unmarked, and the dative marked pronoun *nyanungu-ku* is coreferential with the anaphor *=nyanu* which in turn is coreferential with the unmarked subject *Jakamarra*. In (12b), in which the subject is marked with ergative case, the presence of the dative pronoun *nyanungu-ku*, whether interpreted as coreferential or disjoint with the subject, renders the sentence ungrammatical.²⁰

In (12b), the dative object argument of the verb *yi-nyi* 'give' cannot be expressed by a dative-marked pronoun *nyanungu-ku* interpreted as coreferential with the ergative subject *Jakamarra-rlu* via the anaphoric enclitic *=nyanu*. When the DD enclitic *=rla* is added to the auxiliary as in (12c), the anaphor *=nyanu* must be dative and coreferential with the subject, but it can be interpreted as either a dative object (recipient of giving) or as a dative applicative (e.g., "higher" benefactive/possessive applicative). The DD enclitic *=rla* is obligatorily disjoint in reference from the subject, and can be interpreted as linked to either an object or applicative role, but not the same role as the one associated with the anaphor.

²⁰See Hale et al. (1995: 1440–1441) and Simpson (1991: §6.3) for further examples and discussion of anaphora in Warlpiri.

- (12) a. *Nyanungu-ku_{i/*j} ka=nyanu_{i/*j} Jakamarra_i yulka-mi.*
 3-DAT PRS.IND=ANAPH J. love-NPST
 ‘Jakamarra loves himself.’ (Hale et al. 1995: 1441, ex. 42a)
- b. * *Jakamarra-rlu_i ka=nyanu_i nyanungu-ku_{i/*j} kuyu yi-nyi.*
 J.-ERG PRS.IND=ANAPH 3-DAT meat give-NPST
 ‘#Jakamarra is giving himself meat.’ (Hale et al. 1995: 1440, ex. 40c)
- c. *Jakamarra-rlu_i ka=nyanu_{i/*j}=rla_{i/j} nyanungu-ku_{i/j} kuyu yi-nyi.*
 J.-ERG PRS.IND=ANAPH=DD 3-DAT meat give-NPST
 ‘_i gives himself_{i/*j} meat for him_{i/j}.’
 ‘_i gives him_{i/j} his_{i/*j} meat.’
 ‘_i gives him_{i/j} meat for himself_{i/*j}.’

The DD structure in (12c) is similar to that in (13a) in which =nyanu is coreferential with the dative-marked applicative argument *nyanungu-ku*, and not the dative-marked object *kuyu-ku* ‘meat’ of the verb *warri-rni* ‘look for’. As in (12c), the presence of two dative-marked NPs, the dative object and the dative applicative, is marked by the invariant DD auxiliary enclitic =rla added to the anaphoric enclitic =nyanu. In (13b), which lacks a dative applicative argument, the dative object is expressed by =rla coreferential with *kuyu-ku* ‘meat’, but necessarily disjoint with the ergative subject *Jakamarra-rlu*. The free dative-marked pronoun *nyanungu-ku* in (13b) is coreferential with the dative object *kuyu-ku*, thus functioning as a determiner within the same complex dative-marked NP as *kuyu-ku*. In (13c), the presence of a dative object and a dative applicative is signalled by the DD enclitic sequence =rla=jinta, in which each element has a different referent. The semantic ambiguity of (13c) derives from which grammatical function – goal of search (dative object) or beneficiary of search (applicative) – is linked to the dative enclitic -rla which is coreferential with the human referring dative-marked NP *nyanungu-ku*, while =jinta refers to the non-animate dative-marked NP *kuyu-ku*. In (13d), in which both dative-marked NPs are coreferential with the dative enclitic =rla, the DD =jinta signals an implied purpose.

- (13) a. *Jakamarra_i-rlu ka=nyanu_{i/*j}=rla_{i/j} warri-rni kuyu_{i/j}-ku*
 J.-ERG PRS.IND=ANAPH=3DAT seek-NPST meat-DAT
 *nyanungu_{i/*j}-ku.*
 3-DAT
 ‘Jakamarra_i is looking for his_i meat/is looking for meat for himself_i.’
 (Hale et al. 1995: 1440, ex. 41a)

- b. *Jakamarra_i-rlu ka=rla_{i/j} warri-rni [kuyu_{i/j}-ku nyanungu_{j/*i/*k}-ku].*
 J.-ERG PRS.IND=3DAT seek-NPST meat-DAT
 3-DAT
 'Jakamarra is looking for that meat.'
- c. *Jakamarra_i-rlu ka=rla_{i/j}=jinta_{i/*j/k} warri-rni kuyu_{i/*j/k}-ku nyanungu_{i/*j/*k}-ku.*
 J.-ERG PRS.IND=3DAT=DD seek-NPST meat-DAT
 3-DAT
 'Jakamarra_i is looking for meat_{i/*j/k} for him_{i/j/*k}'.
 'Jakamarra_i is looking for him_{i/j/*k} for meat_{i/*j/k}'.
- d. *Jakamarra_i-rlu ka=rla_{i/j}=jinta_{i/*j} warri-rni [kuyu_{i/j}-ku nyanungu_{i/j}-ku].*
 J.-ERG PRS.IND=3DAT=DD seek-NPST meat-DAT
 3-DAT
 'Jakamarra is looking for that meat for some purpose (e.g. to cook/eat).'

Simpson (1991: 167) points out that while the 3rd singular dative enclitic =rla may be added to an anaphoric clitic as a DD marker as in (13a), it is not possible to have a coreferential reading between these non-subject enclitics, thus the ungrammatical status of (14). Only the subject can determine the reference of an anaphor.

- (14) * *Wangka-ja=lpa=rna=nyanu=rla.*
 speak-PST=IPFV=1S=ANAPH=DD
 ≠'I spoke to him about himself.' (Simpson 1991: 167, 137)

As will have been noted, the DD enclitic has the unique form =rla, except when the preceding dative enclitic is also =rla, as in (13c–13d), in which case the DD is marked by -jinta. The choice of which argument is represented by the first dative enclitic which encodes person and/or number features, and which by the DD enclitic is determined on the basis of grammatical function and a person feature hierarchy. This is partially exemplified by the auxiliary enclitics used with the verb *kunka-mani* 'to get even with' in (15). Here the 2nd person dative enclitic =ngku refers to the person on whom the subject plans to take revenge, while the obligatory DD enclitic =rla signals an understood applicative argument, i.e., because of what you did (to me/someone).

- (15) *Kapu=rna=ngku=rla kunka-ma-ni jalangu-rlu (nyuntu-ku).*
 FUT=1s=2=DD revenge-CAUS-NPST now-ERG (you-DAT)
 'I'll get even with you now for it.'

In (16) in which the goal of revenge is a 3rd person, it is expressed by the DD, while the preceding dative clitic expresses the features of the person on whose behalf revenge is taken. In (16a–16c), the dative enclitic – 2nd person in (16a), 1st person in (16b), and anaphoric in (16c) – is coreferential with the subject thus encoding coreference between avenger and avenged.

- (16) a. *Kunka-ma-nta=ngku=rla nyuntulu-rlu wiyarrpa-rlu.*
 revenge-CAUS-IMP=2=DD you-ERG poor_thing-ERG
 'Take your revenge for it (on him/her/them), you poor thing.' [HN59]
- b. *Kapu=rna=ju=rla jukurra-rlu=jala kunka-ma-ni.*
 FUT-1s=1=DD tomorrow-ERG=CFOC revenge-CAUS-NPST
 'I will get my revenge for it (on him/her/them) tomorrow (not now).'
- c. *Ngilyi-parnta_i-rlu ka=nyanu_{i/*j}=rla kunka-ma-ni.*
 rotten_one-ERG PRS.IND=ANAPH=DD revenge-CAUS-NPST
 'That rotten one_i is taking her_{i/j} revenge for it (on him/her/them).'

2.3 Coreference between subject and pronoun in a phrase introduced by a semantic case

A semantic case-headed nominal expression, similar to an English prepositional phrase, acting as either a complement or an adjunct can consist of a free pronoun to which a semantic case, such as the perative *-wana* in (17a–17b) is added. It can be coreferential with the subject, as in (17a–17b).²¹

- (17) a. *Jakamarra_i-rlu yirra-rnu / nya-ngu nyanungu_{i/j}-wana.*
 J.-ERG put-PST / see-PST 3-PERL
 'Jakamarra_i put/saw it_i* near him_{y_j}.'
- b. *Ngajulu-rlu=rna yirra-rnu / nya-ngu ngaju-wana.*
 1-ERG=1s put-PST / see-PST 1-PERL
 'I put/saw it near me.'

²¹A similar example with postposition *-jangkardu* is cited in Simpson (1991: 169, ex. 140).

3 Other relationships within reflexive clauses

3.1 Reflexives and part-whole relations

The syntax of part-whole, including body part, constructions has been described by Hale (1981) and Laughren (1992), *inter alia*. In what Hale (1981: 338) called the “favorite mode of expression” of part-whole relations, the “whole” is linked to a primary syntactic function such as subject and object while the “part” is expressed by an NP assigned the same case as the whole, but not included in the NP referring to the whole. The “part” NP acts like a secondary predicate which specifies the relevant “part” of the “whole”.

In (18a), a 3rd person singular subject acts on a 3rd person singular object. Subject and object are referentially disjoint, hence the absence of an auxiliary pronominal enclitic. The ergative-marked NP *kurd़u-n̥gku* ‘child’ is associated with the subject, while the unmarked NP *ngati* ‘mother’ is associated with the object function. The ergative case on the NP *rdaka-n̥gku* ‘hand/finger’ identifies it as the relevant part of the child as the ‘poker’ while the unmarked NP *milpa* ‘eye’ is the relevant part of the mother, the ‘poked’.

In (18b), the object is coreferential with the subject, indicated by the anaphoric enclitic *-nyanu* (and the unacceptability of an object NP), so that the same ‘child’ is both the ‘poker’ and the ‘poked’. However, the different parts of the child involved in the ‘poking’ event referred to by (18b) play different roles; as in (18a) they are aligned with the different thematic roles. Both (18a–18b) are transitive, but semantically vague in that they allow an interpretation in which the poking action is either intentional or not intentional.

- (18) a. *Kurd़u-n̥gku ka ngati panti-rni milpa rdaka-n̥gku.*
child-ERG PRS.IND mother poke-NPST eye hand-ERG
'The child pokes mother in the eye with his finger.'
- b. *Kurd़u-n̥gku ka=nyanu rdaka-n̥gku panti-rni milpa.*
child-ERG PRS.IND=ANAPH hand-ERG poke-NPST eye
'The child pokes himself in the eye.'

The sentences (18a–18b) in which intentionality on the part of the referent of the subject can be inferred contrast with those in (19). In (19a) the pointed object which makes contact with the hand of the child is referred to by the ergative-marked subject NP *jiri-n̥gki* ‘prickle/thorn’, while in (19b) it is an illness whose

symptoms include the production of quantities of nasal mucus (also called *mirnta*) that is expressed as the subject which affects the child expressed as the object.²²

- (19) a. *Jiri-ngki kurdu pantu-rnu rdaka.*
 prickle-ERG child poked-PST hand
 ‘A prickle got stuck into the child’s hand.’ (Lit. ‘A prickle stabbed/pierced the child hand.’)
- b. *Miirnta=rlu kurdu paka-rnu.*
 flu=ERG child hit-PST
 ‘The child was struck by flu.’ (Lit. ‘Flu/nasal mucus struck the child.’)

What is common to the sentences in (18–19) is that the “patient”, i.e., the entity/individual that is affected by the action, is expressed as the syntactic object, while the ergative-marked subject causes the occurrence of the event referred to, whether deliberately or not.

3.1.1 Reflexive clauses with change of state verbs

Verbs which express a change of state in a patient without denoting a cause or agent thematic role are typically formed in Warlpiri by complex verbs consisting of a preverbal predicate which combines with an intransitive “change” verb. Sentences featuring the Warlpiri equivalent of the prototypical English “change of state” verb *break* are given in (20). *Rdilyki* ‘broken’ belongs to a set of “stage” predicates which refer to the result of a change of state and which combine with an intransitive inflecting verb such as *ya-* ‘go’ to create an inchoative verbal predicate.

The inflected verb *ya-nu* [go-PST] in (20a), which in this context denotes a simple change of state undergone by the subject’s referent, differs in form and meaning from the inflected transitive verb *pu-ngu* [strike-PST] in (20b) which implies an action carried out by an agent which produces a change of state in a patient. In (20a) the patient role is borne by the unmarked subject NP *kurdu*.²³

²²The verb *pantirni* denotes contact between a pointed entity and the surface of some entity which may be pierced (cf. English *jab*, *pierce*, *stab*, *stick into*) or not (cf. English *poke*).

²³It is possible to add a dative-marked phrase to (20a) to refer to an entity which may be inferred to have “caused” the situation referred to, but this is not relevant to the argument set out here, as in (i) (see Simpson 1991: 386–388).

- (i) *Waku=rla marlaja rdilyki-ya-nu kurdu watiya-ku/wati-ki.*
 arm=3DAT because_of broken-go-PST child stick-DAT/man-DAT
 ‘The child broke his arm because of the stick/man...’

The agent in (20b) is expressed by the ergative-marked subject NP *wati-ngki*, while the patient object NP *kurd़u* is unmarked. The affected body part *waku* ‘arm’ is also unmarked in both (20a–20b). In the stative sentence in (20c) *rdilyki* occurs as a nominal predicate external to the verb *nguna* ‘lie’. This contrasts with its use in (20a–20b) in which it is in a tighter preverbal relation with the inflecting verb.

- (20) a. *Waku rdilyki-ya-nu kurdu.*
arm broken-go-PST child
'The child_i broke his_{i/*j} arm.' (Lit. 'The child broke arm(wise).')
b. *Waku rdilyki-pu-ngu kurdu waru-wati-ngki punku-ngku.*
arm broken-strike-PST child man-ERG bad-ERG
'The nasty man broke the child's arm.' (Lit. 'The bad man broke the child arm(wise).')
c. *Kurlarda yali ka nguna rdilyki.*
spear that PRS.IND lie.NPST broken
'That spear is lying broken.'

In contrast with (20a), the reflexive sentence in (21) implies that the child's action of hitting himself (with a stick) caused his own arm to break.

- (21) *Waku=nyanu kurdu-ngku rdilyki-pu-ngu (watiya-rlu).*
arm=ANAPH child-ERG broken-strike-PST (stick-ERG)
'The child hit and broke his (own) arm (with a stick).'

In this respect Warlpiri differs from Romance languages in which the reflexive sentence, as exemplified by the French sentence in (22a), does not necessarily imply an agent, but is interpretable as an inchoative sentence featuring a patient subject and body part complement, equivalent in meaning – but not in form – to the Warlpiri sentence in (20a).²⁴

- (22) a. *L' enfant s'est cassé le bras.*
the child REFL-is broken the arm
'The child broke his arm.'

²⁴Change of state verbs such as *casser* ‘break’ are prototypical unaccusative verbs (Perlmutter 1978) in which the patient argument is first linked to the object function and then raised to the subject position (Burzio 1986; Levin & Rappaport Hovav 1995). This construction, sometimes referred to as reflexive passive, differs from a reflexive construction in which distinct agent and patient roles are linked to a subject and object function associated with the same referent, as in the Warlpiri sentence in (21).

- b. *Elle lui a cassé le bras.*
 she 3SG.DAT has broken the arm
 ‘She broke his arm.’

Another difference between Romance languages and Warlpiri is that in the former it is the dative non-subject clitic pronoun, exemplified in (22b) by *lui* (as opposed to accusative *le* or *la*) that refers to the whole while the affected part is referred to by the object NP as *le bras* in (22a–22b), whereas in Warlpiri, it is the affected whole which is the object in a transitive clause. In (23a), only the object of the finite clause can control the reference of the understood subject of the embedded non-finite clause *parnka-nja-kurra* ‘while running’. The dative enclitic 3rd person singular pronoun *=rla* in (23b) cannot be associated with the affected whole. If, in (23a–23b) *waku* ‘arm’ is construed as object, it is interpreted as unattached to a body.

- (23) a. *Rdilyki-paka-rnu waku parnka-nja-kurra.*
 broken-hit-PST arm run-INF-OBJCOMP
 ‘She hit and broke his arm while (he) running.’
- b. * *Rdilyki-paka-rnu=rla waku.*
 broken-hit-PST=3DAT arm.
 ≠‘She hit and broke his arm.’

3.2 Reflexive clauses with change of location verbs

The location complement of “change of location” verbs is expressed by a phrase headed by a semantic case such as the locative, allative, elative, or perative. When the location is part of some whole as in (24), there are two possible modes of expression. One is to place both the whole and the part in separate phrases headed by an identical semantic case as in (24a), the other is to express the “whole” as a dative object marked by a dative auxiliary enclitic while the “part” is independently expressed in a semantic case headed phrase, as in (24b).

- (24) a. *Nama ka langa-kurra yuka-mi kurdu-kurra.*
 ant PRS.IND ear-ALL enter-NPST child-ALL
 ‘The ant is entering the child’s ear.’ (Lit. ‘ant into ear enters into child’) (Hale 1981: 341, ex. 24)
- b. *Nama ka=rla_i langa-kurra yuka-mi kurdu_i-ku.*
 ant PRS.IND=3DAT ear-ALL enter-NPST child-DAT
 ‘The ant is entering the child’s ear.’ (Lit. ‘ant to him_i/*_j into ear enters to child_i’) (Hale 1981: 341, ex. 24)

Where referential identity between the subject and the location is intended, only the dative object strategy of (24b) can force a reflexive interpretation, as shown in (25a). The free 3rd person pronoun *nyanunu* in (25b) may be interpreted as coreferential with the subject or not.

- (25) a. *Wati-ngki_i=nyanu_{i/*j} kuruwarri kuju-rnu rdukurduku-rla.*
man-ERG=ANAPH design throw-PST chest-LOC
'The man_i painted a design on his_{i/*j} chest.'
- b. *Wati-ngki_i kuruwarri kuju-rnu nyanunu-rla_{i/j} rdukurduku-rla.*
man-ERG design throw-PST 3-LOC chest-LOC
'The man_i painted a design on his_{i/j} chest.'

3.3 Reflexive clauses with “bodily grooming” verbs

Unlike English in which transitive verbs denoting acts of bodily grooming, especially with a human subject, may have a reflexive interpretation in the absence of an overt object NP, in Warlpiri the reflexive enclitic pronoun must be used, as with other transitive “affect by contact” verbs. The self-grooming interpretation of the reflexive clause in (26a) contrasts with the other-grooming interpretation in the non-reflexive clause in (26b).

- (26) a. *Parlju-rnu=nyanu (nyanunu-rlu).*
wash-PST=ANAPH 3-ERG
'She washed (herself).'
- b. *Parlju-rnu (nyanunu-rlu).*
wash-PST 3-ERG
'She_i washed it/him/her_{*i}. ≠ 'She washed (herself).'

When an NP referring to the affected body part is added as in (27), verbs like *parljirni* ‘wash’ behave the same as the other transitive “affect by contact” verbs seen in §3.1.1.²⁵

²⁵Simpson (1991: 170, ex. 142) cites a similar example with ‘shave’ taken from Hale’s 1959 field-notes, (i).

- (i) *Jangarnka=npa=nyanu jarntu-rnu?*
beard=2S=ANAPH shave-PST
'Did you shave your beard off?'

- (27) a. *Parlju-rnu=nyanu (nyanungu-rlu) jurru.*
wash-PST-ANAPH 3-ERG head/hair
‘She_i washed her_{i/*j} hair.’
- b. *Parlju-rnu (nyanungu-rlu) jurru.*
wash-PST 3-ERG head/hair
‘She_i washed her_{*i} /his/its hair.’

Similarly, verbs such as *majarni* ‘stretch, straighten’ when used to express bodily self-manipulation must be used in a syntactically reflexive construction, as in (28a–28b). The absence of the anaphoric non-subject enclitic as in (28c–28d) can only be interpreted with disjoint reference between subject and object. In (28d), the arm (*waku*) that is straightened is part of the referent of the grammatical object not coreferential with the subject.

- (28) a. *Maja-rnu=nyanu (nyanungu-rlu).*
straighten-PST=ANAPH 3-ERG
‘She straightened up/stretched (herself).’
- b. *Maja-rnu=nyanu (nyanungu-rlu) waku.*
straighten-PST=ANAPH 3-ERG arm
‘She_i straightened her_{i/*j} arm.’
- c. *Maja-rnu (nyanungu-rlu).*
straighten-PST 3-ERG
‘She_i straightened him/her_{*i}/it.’
- d. *Maja-rnu (nyanungu-rlu) waku.*
straighten-PST 3-ERG arm
‘She_i straightened her_{i/j}/his/its arm.’

Disjoint reference between subject and object is clear in (29a). In (29b) the presence of the anaphor =*nyanu* coreferential with the subject cannot be interpreted as the object of straightening, since that is the role of the NP *kurlarda* ‘spear’ (which is not a “part” of the subject’s referent, unlike *waku* in 28b). The presence of =*nyanu* in (29b) expresses a relationship of alienable possession between the subject and the object (‘spear’). The presence of the DD enclitic =*rla* in (29c) signals a purpose for which the spear is being straightened.

- (29) a. *Maja-rnu kurlarda (nyanungu-rlu).*
straighten-PST spear 3-ERG
‘She straightened the spear.’

- b. *Maja-rnu=nyanu kurlarda (nyanungu-ku).*
straighten-PST=ANAPH spear 3-DAT
'He_i straightened his_{i/*j} spear.'
- c. *Maja-rnu=nyanu=rla kurlarda (nyanungu-ku).*
straighten-PST=ANAPH=DD spear 3-DAT
'He straightened the spear for himself (for some purpose).'
'He_i straightened his_{i/*j} spear (for some purpose).'

Note that in (29b–29c) the anaphor =nyanu may be coreferent with an overt dative marked pronoun (*nyanungu-ku*), whereas in (28a–28b), =nyanu is substituted for an unmarked object NP and cannot be coreferential with an unmarked pronoun.

4 Reflexive relations within NP

4.1 Kin relation propositus anaphor -nyanu

Warlpiri employs three distinct syntactic constructions to express the binary relations expressed in English by the genitive construction: possessor in expressions of alienable possession (30a), whole in expressions of a part-whole relation (30b), and the propositus in kin relation expression (30c). Kin terms denote binary relations, e.g., is mother of (x, y). A person may be referred to as a function of their relationship to another/others. The term “propositus”, taken from the anthropological linguistics literature, denotes the person(s) to whom the referent of an expression like *John’s mother* is related by the named kin relation. In this example, *John* is the propositus.

- (30) a. Alienable possession
Jakamarra-kurlangu kurlarda.
J.-POSS spear
'Jakamarra’s spear.'
- b. Part whole
*Jakamarra_i=nyanu_{i/*j} yarnka-ja jurru-ku.*
J=ANAPH grab-PST head-DAT
'Jakamarra_i grabbed hold of his_{i/*j} head.'
- c. Kin propositus
[*Jakamarra_i-ku ngati-[nyanu_{i/*j}]]-rlu purra-ja.
J.-DAT mother-ANAPH-ERG cook-PST
'Jakamarra’s mother cooked it.'*

Unlike the auxiliary anaphoric enclitic pronoun *=nyanu* in (30b), the nominal suffix *-nyanu* in (30c) is hosted by a kin relation term *ngati* ‘mother’ with which it forms a complex nominal which may host case suffixes, as exemplified by the ergative suffix. The syntactic scope of the ergative case extends to the entire NP which includes the dative-marked propositus *Jakamarra-ku* which is coreferential with the anaphoric suffix *-nyanu*. In the absence of a propositus phrase such as *Jakamarra-ku* in (30c), *-nyanu* may be contextually bound and interpreted as ‘his/her/its/their mother’ or it may have an arbitrary interpretation as in ‘the mother’ implying ‘the mother of someone’.

The anaphoric suffix *-nyanu* contrasts with the special addressee propositus suffix *-puraji* in (31a–31c). As shown in (31b–31c),²⁶ the 2nd person kin propositus suffix *-puraji* may be coreferential with the 2nd person enclitic pronoun and with the free pronoun that is also coreferential with the enclitic pronoun.

- (31) a. *Ngati-puraji.*
mother-YOUR.KIN
'Your mother.'
- b. *Ngati-puraji-rli=ngki nya-ngu (nyuntu).*
mother-YOUR.KIN-ERG=2 see-PST (you)
'Your mother saw you.'
- c. *Ngati-puraji=npa nya-ngu (nyuntulu-rlu).*
mother-YOUR.KIN=2s see-PST (you-ERG)
'You saw your mother.'

Unlike *-nyanu* which may co-occur with a dative-marked propositus NP with which it is coreferential, the pronominal suffix *-puraji* cannot. Rather a dative marked free pronoun propositus phrase is only compatible with the anaphoric propositus suffix *-nyanu* as shown by the contrast between (32a–32b).

- (32) a. *Nyuntu-ku ngati-nyanu.*
you-DAT mother-ANAPH
'Your mother.'
- b. * *Nyuntu-ku ngati-puraji.*
you-DAT mother-YOUR.KIN

²⁶The propositus suffix *-puraji* is a grammatical morpheme. It comes in the same position as the anaphoric suffix *-nyanu* and it only refers to 2nd person as propositus of kin relation designated by the N it attaches to. There is also a speaker referring propositus suffix *-na* that is not as productive as the 2nd person *-puraji*; it has been “absorbed” into some kin term stems.

The alienable possessor marked by the suffix *-nyangu* on pronoun stems, *-kurlangu* on other stems as in (30a), can also mark a propositus phrase – especially in reference to descending generation kin – in which case coreference between possessive-marked free pronoun and pronominal propositus suffix is grammatical as shown in (33).²⁷

- (33) *Nyuntu-nyangu ngati-puraji.*
you-POSS mother-YOUR.KIN
'Your mother.'

4.2 Set reflexive use of anaphoric *-nyanu*

Simpson (1991: §3.4.3) describes another use of the anaphor *nyanu* within a complex nominal expression of the form N-*kari-yi-nyanu*. N-*kari* means 'other N', while *yi* (I gloss here as a ligative [LIG]) appears to be an old auxiliary base reserved for the expression of binary relations within a complex NP.²⁸ In (34a), the implication that the subject referent belongs to the class of *Napaljarri* women is the only interpretation compatible with the dative object. Both "giver" and "recipient" belong to this same set. In (34b), the subject referent may or may not be a *Napaljarri*; what is presupposed here is that something has been previously given to another woman who is also a *Napaljarri*.

- (34) a. *Yi-nyi ka=rla Napaljarri-kari-yi-nyanu-ku.*
give-NPST PRS.IND=3DAT Napaljarri-other-LIG-ANAPH-DAT
'She is giving (it) to another Napaljarri (woman) like herself.'
b. *Yi-nyi ka=rla Napaljarri-kari-ki.*
give-NPST PRS.IND=3DAT Napaljarri-other-DAT
'She is giving it to another Napaljarri.'

In Eastern Warlpiri *-nyanu* in this set reflexive construction contrasts with the use of 1st and 2nd person pronominal suffixes homophonous with the auxiliary enclitic forms: 1st person *-ji* and 2nd person *-ngku*. In other dialects, *-nyanu* is used irrespective of the subject's features. In (35), the implication is that both the addressee subject and the dative phrase belong to the set of big-headed creatures. With the 2nd person pronoun *-ngku*, vowel harmony applies so that the ligative is *yu*.

²⁷For analysis of the syntactic contrast between the dative marked and possessive marked propositus phrase and its relationship to the kin term expression see Laughren (2016).

²⁸McConvell (1996) has documented auxiliary structures within complex NPs in Mudburra, another Ngumpin-Yapa language.

- (35) *Wilyipi-pardi-ya=rla jurru-lalykalalyka-kari-yu-**ngku-ku**.*
 out-emerge-IMP=3DAT head-big-other-LIG-2-DAT
 ‘Go out to that other big head like you/yourself!’

The set reflexive relation may also hold between non-subject NPs as in (36a). The anaphor may also be present in the subject NP as in (36b) where it forces the implication that Rocky is also a dog.

- (36) a. *Kurlarda ka=rna=lu=rla limi-yirra-rni*
 spear PRS.IND=1S=PL.S=3DAT add-put-NPST
kurlarda-kari-yi-nyanu-ku.
 spear-other-LIG-ANAPH-DAT
 ‘We put spears with other spears like themselves.’ (Simpson 1991: 184, ex. 158)
- b. *Maliki-kari-yi-nyanu-rlu nya-ngu Rocky.*
 dog-other-LIG=ANAPH-ERG see-PST Rocky
 ‘Another dog like him_i saw Rocky_i.’ (Simpson 1991: 184, ex. 159a)

5 Coreference relations in non-finite clauses

As there is no auxiliary in non-finite clauses it is not possible to express coreference between subject and non-subject (object, applicative) by means of the auxiliary anaphor =nyanu. In most non-finite clauses the understood subject is phonologically null and coreferential with the subject or object (or some other constituent) of the matrix finite clause. A pronoun in the non-finite clause has disjoint reference with the understood or “controlled” subject of the non-finite clause containing it, as the following examples in (37) taken from Simpson (1991) demonstrate.²⁹

- (37) a. *Ngarrka-**ngku** ka kurdu_j ngarri-rni*
 man-ERG PRS.IND child tell-NPST
*nyanungu*_j-ku ngapa yi-nja-ku.*
 3-DAT water give-INF-DAT
 ‘The man tells the child to give him (=man/other; ≠child) water.’
 (Simpson 1991: 178, ex. 150a)

²⁹The non-finite clause is set out on the second line of sentences in (37–38).

- b. *Marlu-ŋku ka jakamarra_j nya-nyi*
kangaroo-ERG PRS.IND J. see-NPST
nyanungu_j-ku wurru-ka-nja-kurra.
3-DAT creep-move-INF-OBJCOMP
'The kangaroo sees Jakamarra sneaking up on it/him (=Jakamarra).' (Simpson 1991: 178, ex. 150b)

As expected, where the subject of the matrix finite clause such as *wati-ŋki* in (38) is coreferential with the understood subject of an embedded non-finite clause, the pronominal object within the non-finite clause cannot be interpreted as coreferential with the matrix subject.

- (38) *Wati-ŋki_i ka=lu_i yunpa-rni*
man-ERG PRS.IND=PL.S sing-NPST
nyanungu-rra_{i/j} paka-rninja-karra-rlu.
3-PL hit-INF-SUBCOMP-ERG
'The men_i are singing while poking them_{i/j}.'

To express interclausal coreference relations as in (39),³⁰ two finite clauses are required so that the anaphor is locally bound within its clause by its subject, which can be coreferential (or disjoint) with an NP in the accompanying clause.

- (39) [*Wati-ŋki-ka=lu yunpa-rni*] [*kujaka=lu=nyanu panti-rni*].
man-ERG-PRS.IND=PL.S sing-NPST COMP=PL.S=ANAPH pierce-NPST
i. 'Men_i are singing while they_i are stabbing themselves_{i/*j}.'
ii. 'Men_i are singing while they_j are stabbing themselves_{i/j}.'

6 Special uses of reflexive constructions

6.1 Inherent reflexive verbs

Some Warlpiri verbs are only used in a reflexive construction and can be classed as "inherently reflexive". One of these is *ngarrpangarrpa-ma-ni* 'to tell lies about' which is illustrated in (40), in which the non-subject anaphor =*nyanu* represents a dative applicative argument which must be coreferential with the subject. In (40b) the presence of an additional dative argument *ngipiri-ki* is also registered by the DD enclitic =*rla* in the auxiliary complex.

³⁰ A reciprocal interpretation of the second clause in (39) is possible, i.e. '...while they are stabbing each other.'

- (40) a. *Ngarrpangarrpa-ma-ni ka=nyanu kurdu-ngku*
 deceit-CAUS-NPST PRS.IND=ANAPH child-ERG
kuja kuyu nga-rnu.
 COMP meat eat-PST
 ‘The child is lying about (what he did) which was that he ate the meat.’
- b. *Ngarrpangarrpa-ma-nu=nyanu=rla ngipiri-ki yapa-ngku,*
 deceit-CAUS-PST=ANAPH=DD egg-DAT person-ERG
palka=jala.
 present=CFOC
 ‘The child lied about the eggs – (they are) actually here.’

6.2 Reflexive construction in inchoative monadic clauses

The reflexive constructions discussed in §2.2 all involve two arguments with distinct thematic roles, one associated with the subject and the other with the object or applicative function, but with both linked to a single referent. Here I will briefly discuss monadic reflexive constructions in which a single thematic role is expressed by the subject in a clause that is formally reflexive. In Warlpiri these constructions are mainly confined to expressions of change in the internal state of a being (typically human) over which the undergoer has no control. Such a thematic role would be expected to be assigned to the object function. The obligatory non-subject enclitic coreferential with the subject would seem to represent this alignment of thematic role and grammatical function. These constructions are used with agent-patient verbs whose NP subject is marked ergative. In (41a) the enclitic anaphor *=nyanu* signals coreference with the ergative marked NP subject *yapa-ngku* whose plural number features are marked by the subject enclitic pronoun *=lu*. The ergative-marked *jarda-ngku* functions as an instrumental phrase, specifying the nature of the affect. An alternative construction expressing a similar meaning is shown in (41b) in which *jarda-ngku* is the subject which brings about a change of state in the object *yapa* whose number features are specified by the 3rd person plural non-subject enclitic *=jana* (cf. 19a–19b). The intransitive (41c) differs from both (41a–41b) in being stative – not denoting a *change* of state.³¹

³¹The inchoative versus stative distinction exemplified by (41a–41c) is analogous to the distinction made in French in which the inchoative reflexive *s'endormir* ‘to fall asleep’ contrasts with stative *dormir* ‘to sleep’.

- (41) a. Inchoative

Pirdi-pu-ngu=lu=nyanu yapa-ngku jarda-ngku.

kill-strike-PST=PL.S=ANAPH person-ERG sleep-ERG

‘The people fell asleep.’ (Lit. ‘The people did themselves in with sleep.’)

- b. Causative

Jarda-ngku=jana yapa pu-ngu.

sleep-ERG=3PL person strike-PST

‘The people were overcome by sleep./The people became sleepy.’ (Lit. ‘Sleep struck the people.’)

- c. Stative

Jarda ka=lu nguna.

sleep PRS.IND=PL.S lie.NPST

‘They are sleeping/asleep.’

The use of monadic reflexive constructions to express externally caused changes of a person’s internal state is also a feature of a special respect register used by initiated men, as shown in (42a)³² which contrasts with the “standard” register sentence in (42b).

- (42) a. *Kati-ka=rra=ngku lipakarra-rlu=lku!*

press_on-IMP=AWAY=2 sleep-ERG=now

‘Go off to sleep now.’ (Lit. ‘Press down on yourself with sleep now.’) [HN59]

- b. *Jarda=lku nguna-ka=rra!*

sleep=now lie-IMP=AWAY

‘Go off to sleep now.’

It is especially emotional states that are expressed by a monadic reflexive construction in Warlpiri. These typically involve the figurative use of a body part in conjunction with a transitive agent-patient “affect by contact” verb. In both (43a–43b) the relevant affected body part NP *miyalu* ‘belly/stomach’ and the subject of which it is the relevant “part” are marked by ergative case, in the case-matching structure discussed in §3.1. The inchoative “reflexive” sentences in (43a–43b) contrast with the stative sentence in (43c) in which the intransitive verb *nyina* acts as

³²The enclitic =*rra* glossed as ‘away’ is a grammatical enclitic in a paradigm with 2 other deictic directional enclitics: =*rni* ‘hither’ and =*mpa* ‘across’. =*Rra* is the ‘thither’ enclitic. These indicate direction/position relative to speaker. These enclitics can only attach to a verbal constituent, i.e. preverb or inflected verb.

a copula linking the predicate *miyalu maju/warlu* with the 1st person subject, and allowing the specification of tense and mood features in the auxiliary complex.

- (43) a. *Ngaju ka=rna=ju miyalu-rlu yarlki-rni.*
 I PRS.IND=1s=1 belly-ERG bite-NPST
 ‘I’m getting really angry.’ (Lit. ‘I am biting myself belly(-wise).’)
- b. *Miyalu-rlu ka=nyanu pi-nyi Jungarrayi-rlı miyi-ngirli.*
 belly-ERG PRS.IND=ANAPH strike-NPST J.-ERG food-ELAT
 ‘Jungarrayi is getting angry over the food.’ (Lit. ‘Jungarrayi is striking himself belly(wise) on account of the food.’)
- c. *Ngaju ka=rna nyina miyalu maju/warlu.*
 I PRS.IND=1s sit belly bad/hot
 ‘I am upset/angry.’ (Lit. ‘I am sitting stomach bad/hot.’)

This aspectual contrast in the domain of emotion verbs, in which the formally reflexive construction signals an inchoative aspect, as opposed to the non-reflexive stative is also found in French: *elle s'est fachée* ‘she got angry’ versus *elle est fachée* ‘she is angry’. A similar contrast is between the reflexive inchoative *Cécile s'énerve* ‘Cécile is getting/gets irritated’ and the causative *Cécile énerve Karine* ‘Cécile irritates Karine’ (Maïa Ponsonnet, personal communication). Where Warlpiri differs from French (and many other languages including Australian ones) is in the restricted domain in which a formal reflexive construction (sometimes referred to as a pseudo-reflexive) signals an externally caused change of state. As noted in §3.1.1, the inchoative versus causative contrast involving change of state predicates such as ‘break’ is expressed in Warlpiri by the use of different inflecting verbs (intransitive vs transitive) rather than the contrast between a formal reflexive construction and a non-reflexive transitive one.³³

7 Wider perspective

Warlpiri reflexive constructions within the domain of a tensed clause are marked by a non-subject enclitic pronoun having either identical person features with the subject enclitic or by an anaphor which has no person or number features and which may be an exponent of either accusative or dative case. This type

³³Typical of Australian languages, Warlpiri also has more generalised inchoative and causative inflecting verbs which combine with a predicative nominal, e.g., *walyka-jarri* ‘become cool’, *walyka-mani* ‘make cool’.

of reflexive (and reciprocal) construction is characteristic of Ngumpin-Yapa languages. In fact *=nyanu* is used in all Ngumpin-Yapa to express coreference and seems to be an innovation which distinguishes this group (McConvell & Laughren 2004). In some languages, such as Walmajarri, it replaces all person object enclitic pronouns including 1st person singular.

This type of reflexive construction is found more widely among Australian languages but it is not the only type of reflexive structure or even the most common. Many Pama-Nyungan languages express a reflexive relation by means of verbal morphology which has a detransitivizing function. In fact the Arandic languages spoken to the immediate east of Warlpiri country are of this type. In many languages of eastern Australia the same morphology is also associated with an anti-passive construction. Some languages spoken along the southern part of the Gulf of Carpentaria such as Yanyula, Garrwa and Waanyi have distinct reflexive pronoun forms which replace both the nominative subject and coreferential accusative object. Like other pronouns they distinguish person and number.³⁴

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

12	1 st and 2 nd person	CFOC	contrastive
13	1 st and 3 rd person	DD	double dative
ANAPH	anaphor	ELAT	elative

³⁴See the cross-linguistic account of Australian data, including Warlpiri, from the perspective of reciprocal clauses in Evans et al. (2007).

INC	inceptive	OBJCOMP	object complementiser
LIG	ligative	PERL	perrelative
NPST	non-past	SUBCOMP	subject complementiser

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Part VI

North America

Chapter 24

Coreference constructions in Zenzonepec Chatino

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This chapter describes reflexive and other coreference constructions in Zenzonepec Chatino, an Otomanguean language of southern Mexico, based on a corpus of naturalistic language use. It is shown that the language has no specific reflexive marker or reflexive construction and that reflexivity and coreference are expressed in the same ways that non-coreference between clausal participants is expressed: coreferential coding devices occupy the multiple grammatical relations that share the coreference. While intensifiers may co-occur with and reinforce coreference for emphasis or disambiguation, they are neither necessary nor sufficient for expressing reflexivity on their own. As domains of grammar that in many languages share formal content or functional overlap with reflexives, the language's reciprocal construction and correlate of middle voice are also briefly described; they do not overlap with reflexive expressions in Zenzonepec Chatino. While most languages display a specialized construction for expressing reflexives, Zenzonepec Chatino provides a clear and interesting exception to this cross-linguistic tendency.

1 Introduction

In their typological survey on reflexive and reciprocal constructions in 150 languages, Heine & Miyashita (2008: 172) state that “reflexivity and reciprocity are universal concepts insofar as all languages can be expected to have some grammaticalized expression for both”. In fact, they cite only one language, the Portuguese-based Creole of São Tomé, as having “no productive means of expressing reflexivity” (Heine & Miyashita 2008: 172). These findings echo those of Kemmer (1993: 24), who states that most languages have a REFLEXIVE MARKER: “a special



marker to indicate that the Agent and Patient (or analogous semantic roles) in an event ordinarily involving two such roles are the same entity". In a similar vein, for the purposes of cross-linguistic comparison, Haspelmath 2023 [this volume] defines a REFLEXIVE CONSTRUCTION as a construction that (i) is used only when (at least) two participants in a clause are coreferential and (ii) also includes some marker indicating that there is such coreference.

The present chapter explores coreference and reflexivity in Zenzontepec Chatino, an Otomanguean language of Southern Mexico, which does not have any reflexive marker, nor does it display any specific construction dedicated to expressing reflexives. Although it is typologically uncommon for a language to lack a reflexive construction, it is not the case that the language has "no productive means of expressing reflexivity". Rather, reflexivity is expressed in the language by using the same constructions that are used when there is no coreference: the typical referential coding devices (NPs, independent or dependent pronouns, anaphoric zero) are used in their canonical positions for expressing each of the coreferential roles, supported by the usual semantic and contextual factors and disambiguation strategies that help language users maintain referential coherence in discourse. A pair of examples illustrate a transitive clause with non-coreferential agent and patient (1a) and a canonical reflexive expression with coreferential agent and patient (1b);¹ in both cases, the agent is expressed by a pronoun that encliticizes to the verb, and the patient, whether a lexical NP or an enclitic pronoun, is flagged by the device *jiʔɻ̥*.

- (1) a. Non-coreferential agent and patient
ntē-naʔa+tiʔi=kāʔá=na jiʔɻ̥ ya.jnii
PROG-see+pain=also=1INCL OBJ plant
'We are also making the plants suffer.' [familia 4:18]
- b. Coreferential agent and patient (reflexive)
Ntē-naʔa+tiʔi=na jiʔɻ̥=na.
PROG-see+pain=1INCL OBJ-1INCL
'We are making ourselves suffer.' [ntelinto itza7 17:22]

After presenting some basic information about Zenzontepec Chatino and the data and methods used in this study in §2, the basic syntax, grammatical relations,

¹The orthography used here differs from the IPA as follows: *r* = [ɾ], *ty* = [tʰ], *ly* = [lʷ], *ny* = [nʷ], *ch* = [χ], *x* = [ʃ], *y* = [j], *j* = [h], *V* = nasal vowel, *VV* = long vowel, *˘* = mid tone, *ˊ* = high tone, '+' = compound boundary. Grammatical abbreviations beyond the Leipzig Glossing Rules are listed at the end of the chapter.

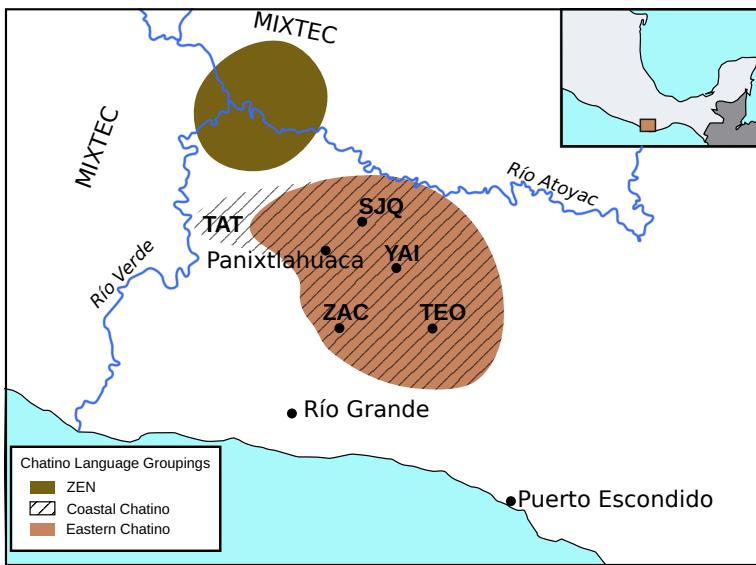
and referential coding devices of the language are described in §3. With those details outlined, the heart of §4 examines the language's correlate of a canonical reflexive construction, and then other expressions of coreference, both within and across clauses. From there, §5 describes Zenzontepec Chatino grammar in the domains that most often overlap with reflexive expressions in languages of the world: middle voice, the reciprocal construction, and intensifiers. The Zenzontepec Chatino correlate of middle voice is rarely used, and, like reflexives, it has no dedicated construction. The reciprocal construction, on the other hand, does have a dedicated marker, which is grammaticalized from the noun 'companion', and thus does not overlap with the expression of reflexives. The language's two intensifiers may be used to reinforce coreference and reflexivity but are themselves never necessary or sufficient for expressing reflexives. Some final remarks conclude the chapter in §6.

2 Language and research context

The municipality of Santa Cruz Zenzontepec is situated in the Sierra Madre del Sur mountains in the southwestern part of Oaxaca state, Mexico (Figure 1). The 2010 national census (Instituto Nacional de Estadística y Geografía 2010) reports a municipal population of about 18,000 residents, some 11,000 of which speak an Indigenous language (in most cases Zenzontepec Chatino), and of which about 4,000 are monolingual Indigenous language speakers. These numbers reflect a palpable and progressing language shift to Spanish. There is ongoing and significant migration out of the traditional community, and the language is also currently spoken in diaspora communities in other parts of Mexico and the United States, especially in California, where most Chatino people work in the state's large agricultural industry.

Zenzontepec Chatino is the most divergent extant language of the Chatino language group, a cluster of about 17 language varieties (Ezéquiel Vásquez, in Boas 1913; Campbell 2013b; Cruz & Woodbury 2014: 265; Sullivant 2016). Chatino is coordinate with the larger and more diversified Zapotec language group (Mechling 1912), and the two together form the Zapotecan group. Zapotecan, in turn, is a major subgroup of the Otomanguean language family (Rensch 1976), which is an ancient and diverse family spread across the Mesoamerican cultural and linguistic area (Kirchhoff 1967[1943]; Campbell et al. 1986; Smith Stark 1988).

The data used in this study were selected from a corpus of about 21 hours of recorded, transcribed, and translated naturalistic discourse of varied genres that has been developed collaboratively with Zenzontepec community members



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Figure 1: Map of the Chatino region in Oaxaca, Mexico (Zenzontepc is represented by ZEN)

since 2007. Examples of language use by about a dozen men and women of varied ages are included in the present work, drawn from about 30 different recorded events. Each example's translation is followed by a tag in square brackets that includes keywords and time points within the source texts, most of which can be consulted and appreciated by registered users of the Endangered Language Archive (Campbell 2013a).²

3 Basic syntax and reference in Zenzontepc Chatino

This section provides a sketch of Zenzontepc Chatino basic syntax (§3.1), grammatical relations (§3.2), and referential coding devices (§3.3), all of which must be understood in order to characterize and understand coreference and reflexivity in the language.

²The reference for the collection refers to the archival depositor, not the owner of the copyright or intellectual property right of the material in the collection, both of which remain with community-member participants.

3.1 Basic syntax and alignment

Zenzontepec Chatino verbs obligatorily inflect for aspect-mood via complex combinations of prefixes (with some fusion) and tonal alternations (Campbell 2016, 2019). The syntax prefers head-initial structures. Basic constituent order in intransitive clauses is VS, as shown in (2), where the sole participant in the event is a lexical NP that follows the intransitive verb. An adjectival predication whose sole participant is expressed by a dependent (enclitic) pronoun is shown in (3). The enclitic attaches directly to the predicate.

- (2) Intransitive verbal clause

Nku-tiyaq tsaka máʔa.
PFV-arrive.here one lady
'A lady arrived.' [laa nka saʔne 1:01]

- (3) Adjectival predication

Tyā? luʔu=ya.
still alive=1INCL
'We're still alive.' [historia1 7:19]

Basic constituent order in transitive clauses is VAO. In (4) a lexical NP agent immediately follows the verb, and the patient NP follows the agent. If the patient-like participant is topical, it is preceded by the flagging device *jiʔɻ* (Dalrymple & Nikolaeva 2011; Campbell 2015), as shown in (5). Thus, the language displays information structure-based differential object marking.

- (4) Transitive clause with non-topical patient

Kākʷá to.niʔi=ri nka-sāʔq=kāʔá nkʷítsq=V? kii?
near house=only PFV-CAUS.be.attached=also child=ANA fire
'Right near the house the child also set a fire.' [ntetakan7 jute7 0:24]

- (5) Transitive clause with topical patient

Nka-s-ati? t̄i ni? kūʔwí=V? jiʔɻ na late?
PFV.CAUS-TRN-get.untied TPLZ 3RSP drunk=ANA OBJ DEF cloth
chaja=V?
tortilla=ANA
'The drunk untied the tortilla cloth.' [kwini7 laja 9:23]

Dependent pronouns in S role (6) and A role (7) encliticize to the predicate, while in O role (8) they always encliticize to the object marker *jiʔɻ*.

- (6) 1sg pronoun in S role
Yākʷá nk-ul-a=q?
there PFV-be.born=1SG
'I was born there.' [antes aparatos 0:53]
- (7) 1sg pronoun in A role
jā tala k-ājá=q? jiʔl=chú?
CONJ for.sure POT-get=1SG OBJ=3SG.F
'because for sure I am going to get her' [burro zopilotes 1:20]
- (8) 1sg pronoun in O role
Nka-lōo=yu jiʔl=q?
PFV-take.out=3SG.M OBJ-1SG
'He took me out.' [kwini7 laja 11:46]

Dependent pronouns in S and A functions never encliticize to the marker *jiʔl*, and dependent pronouns in O function never encliticize to the predicate. Thus, the language displays accusative alignment. Note that there is only one set of dependent (enclitic) pronouns, and one parallel set of independent (emphatic) pronouns in the language (see §3.3). The syntactic function of any NP is encoded by its position in the clause (or its host in the case of enclitic pronouns) as well as semantic, pragmatic, and contextual factors.

The language has flexible constituent order in discourse. For example, the clause in (9) displays OVA constituent order in a construction in which the theme is in focus.

- (9) OVA constituent order
Nkuti chojo nch-ujwi? tī kʷaa.
seed squash PROG-sell TPLZ 1INCL
'We were selling squash seeds.' [naten7 michen 5:36]

3.2 Grammatical relations

The examples in (6–8) show that Zenzontepec Chatino alignment is accusative, and the language has a subject grammatical relation that includes arguments in S and A functions. In ditransitive constructions, the theme-like participant (T) is unflagged if non-topical (10) and flagged by *jiʔl* if topical (11), while the recipient-like participant (R) is obligatorily flagged by *jiʔl*, as shown in both examples. Note that the flagging device *jiʔl* often reduces to *jl* or even contracts to *j-M* in natural speech.

- (10) Ditransitive with non-topical theme

Nt-u-tū?ú=yu kii?j-nuwē?
 HAB-CAUS-TRN.be.inside=3SG.M fire DAT-3ANA
 ‘He put fire to that.’ [juan oso 9:32]

- (11) Ditransitive with topical theme

Tyāá tī ntyūsé j-nuwē? jiʔl nī ná k-ūtsē.
 POT.ITER.give TPLZ god OBJ-3ANA DAT.2SG now NEG POT-be.afraid.2SG
 ‘God will give that back to you, don’t be afraid.’ [historia2 21:31]

Beneficiary (and maleficiary) participants are also obligatorily flagged by *jiʔl*, regardless of their topicality (12). Thus, recipients, beneficiaries, and maleficiaries pattern together as an indirect object grammatical relation (obligatorily flagged by *jiʔl*, glossed as DAT), while patients and themes pattern alike as a direct object grammatical relation (flagged by *jiʔl* only if topical or pronominal, glossed as OBJ). The language thus displays indirective alignment in ditransitives (Malchukov et al. 2010).

- (12) Beneficiary

Liwrū k-u-jnyā=yu jiʔl kitse.
 book POT-CAUS-move=3SG.M DAT village
 ‘He’s going to make a book for the village.’ [historia1 30:22]

Instruments (13) and comitatives (14) are preceded by the flagging device *lōʔō* ‘with’, and together form an adjunct grammatical relation: oblique *lōʔō* (glossed as WITH).

- (13) Instrument

Nti-?nya=ū? kela j-íʔ? lōʔō jlyekʷā.
 HAB-clear=3PL corn.field GEN-3PL WITH hoe
 ‘They would clear their corn fields with hoes.’ [cambios 1:09]

- (14) Comitative

Nk-yánō na nkʷitsq kíʔyū=V? lōʔō juti.
 PFV-stay DEF child male=ANA WITH father(.3)
 ‘The child stayed with his father.’ [nkwitzan ti7i 0:32]

Adnominal grammatical relations include inalienable possessor and alienable possessor. Inalienable possession is expressed by juxtaposition; the possessor NP follows the possessum NP, as shown in (15). If the inalienable possessor is encoded by a dependent pronoun, then it encliticizes to the possessum NP. In

the alienable possession construction, the alienable possessor is – similar to the indirect object adverbial relation – obligatorily flagged by *jiʔɻ* (glossed as GEN), following the possessum (16).

(15) Inalienable possessor

- Lē? nkʷí-chaq̃ nyáɻa na séné=V?*
then PFV-arrive.here mother DEF toad=ANA
'Then the toads' mother arrived.' [kwentu sene 1:19]

(16) Alienable possessor

- Léta tsoʔō nte-chaʔne wātá jiʔɻ=yu.*
very well PROG-reproduce livestock GEN=3SG.M
'His livestock are reproducing very well.' [vaquero 0:59]

Zenzontepc Chatino lacks productive voice alternations such as passives or antipassives that would rearrange argument structure, but instead displays a variety of lexicalized and not widely productive derivational valence alternations (Campbell 2015). The pair of examples in (17) illustrates an equipollent intransitive-causative alternation. The intransitive verb takes the intransitivizing prefix *y-* (17a), which alternates with the transitivizing prefix *t-* and the causative prefix *u-* in the transitive causative verb (17b), but note that the causative marker *u-* is elided by the aspect prefix vowel in vowel hiatus in this instance. The subject of the intransitive clause becomes the direct object of the causative construction, which has an added agent.

(17) An equipollent intransitive-causative alternation

a. Intransitive

- Nk-y-ak̃e na liwrū=V?*
PFV-ITRN-burn DEF book=ANA
'The books were burned.' [historia1 31:05]

b. Causative

- Lūwi? nka-(u-)t-ak̃e=ɻ? j-nā liwrū=V?*
then PFV-(CAUS-)TRN-burn=3PL OBJ-DEF book=ANA
'Then they burned the books.' [historia1 31:47]

There are only a few detransitivizing valence alternations in the language, and they apply to relatively few verbs (Campbell 2015). Thus, the language displays a strong transitivizing preference, as most simplex verb stems are monovalent, and most valence alternations increase transitivity. The preference for low transitivity in the verbal lexicon is paralleled in (or the result of) patterns of language

use in which events are often expressed in constructions that convey low agency, as shown in (18).

(18) De-agentive expression

Y-aa ntsukʷā? jiʔ̄l, tsa majlyā.
PFV-go corn GEN(.3) one almud

'They took him some corn, one almud (~4kg).' (lit. 'His corn went, one almud.') [historia3 6:25]

3.3 Referential coding devices

In order to understand how coreference is expressed in Zenzontepec Chatino, it is necessary to understand how reference is established and tracked in discourse. The sequence in (19) introduces the protagonist of a narrative with the noun 'person' preceded by the indefinite article (the numeral 'one') (19a). In the following clause (19b), the same referent is the subject of the verb, but since it is topical and the only possible agent of the verb, it is not overtly referred to; this is anaphoric zero (Givón 1983). Zero anaphora – glossed as "(.3)" – is common in Zenzontepec Chatino discourse but is only allowed for third person referents. The direct object in the second clause is 'corn', an indefinite mass noun, and since it is non-topical it occurs with no article or flagging. The third clause (19c) is also transitive, with anaphoric zero subject (the protagonist), and another new referent, 'granary', encoded as an indefinite DO. The DO is introduced into the discourse in an alienable possession construction, in which the alienable possessor (the protagonist, coreferential with the subject) is flagged by the genitive marker *jiʔ̄l*, but is again otherwise unexpressed (anaphoric zero).

(19) Introducing and establishing referents in discourse

- a. *Nk-ā+tāká tsaka nyatē ?ne jnyá.*
PFV-be+exist one person HAB.do work

'There was a person that worked.'

- b. *Nt-u-tūkʷā ntsukʷā?*
HAB-CAUS-be.inside(.3) corn

'He planted corn.'

- c. *Wi? nii nkʷ-isē+toq jaʔwa jiʔ̄l.*
ANA now PFV-turn+stand(.3) granary GEN(.3)

'From there, he built his granary.' [kwiten7 nkatz 0:32]

The referring expressions in (19) provide examples of what Givón (1983, 2017: 6) considers devices that express low referential continuity (indefinite lexical NPs) and the highest referential continuity (anaphoric zero) in discourse. Intermediate on the scale from lower to higher referential continuity are definite NPs (see e.g. ‘the book’ in the examples in (17), independent [emphatic] pronouns, as in the 3rd person anaphoric pronoun in subject function in (20), and dependent [enclitic] pronouns like the 3rd person feminine pronoun in (21)).

- (20) Independent pronoun

<i>Ná tsaka nta?q</i>	<i>nka-su</i>	<i>tí</i>	<i>nuwé?</i>
NEG one fresh.ear.corn PFV.CAUS-come.loose TPLZ 3ANA			
‘Not even one fresh ear of corn did <i>she</i> cut.’ [kwiti7yu 12:34]			

- (21) Dependent pronoun

<i>Nka-sá?q=chú?</i>	<i>chaja telā.</i>
PFV.CAUS-be.attached=3SG.F tortilla night	
‘She made tortillas at night.’ [historia3 6:31]	

Table 1 presents the full paradigm of independent pronouns in the language. The first and second person forms have unique roots, with a distinction between singular and plural, and a clusivity distinction in the first person plural. Third person independent pronouns consist of elements which mostly resemble the dependent pronouns fused with demonstratives (proximal, distal, or anaphoric), as appropriate for the context. For example, in (20) the subject is expressed with a form consisting of the general subordinator *nu* and the anaphoric demonstrative *wi?*.

Table 1: Zenzontepec Chatino independent pronouns

		SG	PL
1	EXCL	<i>náá?</i>	<i>(ya)kʷaa</i>
	INCL		<i>naa</i>
2		<i>nu?u</i>	<i>kʷa?q</i>
3	NEUT	<i>nu</i> -DEM	
	M	<i>yu</i> -DEM	<i>ú?-DEM</i>
	F	<i>chú?-DEM</i>	

Table 2 presents the dependent pronouns of the language, which also display the clusivity distinction, as well as additional third person singular distinctions

(non-specific and respectful). As mentioned earlier, the language has only these two parallel sets of pronouns, independent and dependent, which can serve the function of any grammatical relation in the language. The syntactic functions are expressed not by different forms for subject, object, etc., but solely by position (or host), along with semantic and contextual factors.

Table 2: Zenzontepec Chatino dependent pronouns

		SG	PL
1	EXCL	= <i>q?</i>	= <i>ya</i>
	INCL	–	= <i>na</i> ~ = <i>q</i>
2		TONE	= <i>wq</i>
3	NSPC	= <i>u?</i>	= <i>u?</i>
	M	= <i>yu</i>	
	F	= <i>chū?</i>	
	RSP	= <i>ni?</i>	

With the preceding sketch of Zenzontepec Chatino basic syntax, grammatical relations, and referential coding devices now provided, the patterns of expressing coreference in the language are presented next.

4 Reflexives and other coreference constructions

4.1 Canonical reflexive constructions

As outlined in the preceding discussion, Zenzontepec Chatino does not have distinct pronouns for different syntactic functions: the same set of pronouns (dependent pronouns and their corresponding independent pronouns) serves all syntactic functions. Coreference within a clause is expressed by simply using the same pronoun (or another referential coding device for the same referent) in the appropriate positions for the multiple syntactic functions with shared reference. For example, a “canonical reflexive” construction, in which the subject is coreferential with the direct object (Kulikov 2013: 268), contains the coreferential coding devices in the subject and DO positions and is otherwise formally equivalent to a canonical transitive clause without subject and DO coreference. That is, there is no reflexive marker. The examples in (22) illustrate canonical reflexive expressions for first person inclusive, third person masculine, and second person singular referents.

(22) Canonical reflexives

- a. First person inclusive

Ntē-naʔa+tiʔi=na j-nā.

PROG-see+pain=1INCL OBJ-1INCL

‘We are punishing ourselves.’ [ntelinto itza7 17:22]

- b. Third person masculine (singular)

Nte-ʔne+kaya=yu j-yū.

PROG-do+coward=3SG.M OBJ-3SG.M

‘He is making himself a coward.’ [ntelinto itza7 15:00]

- c. Second person singular

Tōtī? jiʔi.

POT.take.care.of.2SG OBJ.2SG

‘Take care of yourself!’ [muchacha ixtayutla 1:48]

The example in (23) illustrates a canonical reflexive expression coordinated with an intransitive clause with coreferential subject. The referent is encoded by the masculine (singular) dependent pronoun as subject and DO of the transitive clause (A and O roles) as well as subject of the intransitive clause (S role).

(23) Canonical reflexive and coreferential subject in coordinate clause

Lēʔ.nu nka-jnyā=yu j-yū lē? nchaa=yu.

then PFV-make=3SG.M OBJ-3SG.M then PROG.go=3SG.M

‘Then he made himself (dressed himself up fancy), and he went.’ [un rico 4:02]

Reflexive expressions like (22b) and (23) that have coreferential third person referents (masculine in these cases) may raise the question of how reflexive expressions would be disambiguated from similar transitive expressions with non-coreferential participants of the same type. While discourse context is usually sufficient for the intended meaning to be understood, if there is potential referential ambiguity, speakers can employ an independent demonstrative pronoun for emphasis, thereby cuing the non-coreference (24). As an alternative to signaling non-coreference this way, another disambiguation strategy is to reinforce coreference by using intensifiers (see §5.3).

(24) Non-coreferential subject and direct object

y-akwiʔ=yu j-nuwē?

PFV-speak=3SG.M OBJ-3.ANA

‘he_i spoke to him_j (that less topical aforementioned one)’ [ku7wi lo jo7o 9:59]

*‘he spoke to himself’

The examples in (25) display reflexive expressions involving complex verbal predication. The first can be analyzed either as a single complex verbal predicate meaning ‘make one(self) Spanish’ (i.e. non-Indigenous) or as a transitive verb with something like a resultative secondary predicate meaning ‘Spanish’. The second example contains a verbal lexeme meaning ‘cure’ or ‘heal’ consisting of a light verb ‘do’ and the non-compounded nominal element *kʷítí* ‘medicine’. The second example can also be analyzed as an indirect reflexive (see §4.2.1).

(25) Reflexive complex verbal predication

a. Resultative-like

Tatiyá tī úʔwq̥ tsáʔ.jlyā nka-jnyā=ūʔ j-ūʔ.
all TPLZ 3PL.DIST Spanish PFV.CAUS-move=3PL OBJ-3PL

‘All of them turned (made themselves) Spanish.’ [historia1 34:14]

b. Complex verbal lexeme

nu.jā ?ne=kāʔá=q kʷítí j-nā
but HAB.do=also=1INCL medicine OBJ/DAT-1INCL
‘but we also cure ourselves’ [historia1 21:33]

In all of the canonical reflexive examples presented so far, the coreferential arguments are coded with the same type of device: dependent pronouns. While this is the most common structure found in reflexive expressions in discourse, combinations of other types of referential device are also possible. For example, in the first clause in (26), the referent is encoded with a topicalized independent pronoun in subject function and anaphoric zero in direct object function.³

(26) Reflexive with independent pronoun and anaphoric zero

*Nkʷ-i-jnyā+kiʔyū tī nuwəʔjī nkʷ-i-tyúkʷa+kuyaʔ tī nuwəʔ
PFV-ITER-make+man TPLZ 3ANA OBJ.(3) PFV-ITER-put+foot TPLZ 3ANA
sapatū tsoʔō.
shoe good.(3)*

‘He made himself manly (put on fancy manly clothes), and he put on his good shoes.’ [cuento DSF 6:59]

In performative ritual speech, notions that would typically be expressed in an intransitive clause, like the prohibitive in (27), can be creatively cast in a causative reflexive expression in order to emphasize the agency and responsibility of the referent, as illustrated twice in the passage in (28), in (28b) and (28c).

³The second clause is similar, with topicalized independent pronoun as subject and anaphoric zero as inalienable possessor.

- (27) Intransitive prohibitive

Ná k-uts_ε=wq!

NEG POT-be.afraid=2PL

‘Don’t be afraid!’ [kela ke kwiten7 3:10]

- (28) Causative prohibitives expressing canonical reflexives

a. *K-aka=wq chujlyāʔ.jyná.*

POT-be=2PL authority

‘You all will be community authorities.’

b. *Ná k-e+k-uts_ε=wq jiʔl=wq!*

NEG POT-CAUS+POT-be.afraid=2PL OBJ=2PL

‘Don’t be afraid!’ (lit. ‘don’t frighten yourselves! ’)

c. *Ná k-e+k-ula?=wq jiʔl=wq!*

NEG POT-CAUS+POT-be.cold=2PL OBJ=2PL

‘Don’t be threatened!’ (lit. ‘Don’t make yourselves cold!’) [telinto itza7 3:10]

Some verbs whose semantics are inherently reflexive, such as ‘bathe oneself’ and ‘dress oneself’, are not expressed as canonical reflexives and can be considered to be merely lexically reflexive, as illustrated in (29). Note that the NP ‘his old clothes’ is coded as an adjunct locative NP and not a direct object.

- (29) Lexical reflexives

Y-ata=yu tsoʔō lēʔ nkʷ-i-tyuʔu=yu sate?

PFV-bathe=3SG.M well then PFV-ITER-be.inside=3SG.M clothes

la-wiīl=yu.

ADJZ-get.cleaned=3SG.M

‘He bathed (himself) well and then got (himself) dressed in his clean clothes.’ [santaru tikela 6:50]

4.2 Other coreference constructions

The preceding discussion focused on canonical reflexive constructions in which there is coreference between the subject and the direct object within a clause (and some cases of coreference across coordinated or sequential clauses). It was shown that Zenzontepc Chatino has no construction particular to reflexives that mark them as such. Instead, the basic transitive construction is used, with the coreferential coding devices occurring in their typical positions. The same is

true for other types of coreference beyond direct reflexives. The following sections discuss coreference in various non-direct reflexive constructions (§4.2.1) and coreference across matrix and embedded clauses (§4.2.2).

4.2.1 Non-direct reflexive expressions

The example in (30) illustrates something like an indirect reflexive (Kemmer 1993: 74) in which both the subject and a recipient-like participant are coreferential.⁴

- (30) Indirect reflexive

<i>Nch-ak^wiʔ=aʔ?</i>	<i>jnyá jiʔl=aʔ?</i>
PROG-speak=1SG	work DAT=1SG
'I am directing myself.' [vaquero 5:09]	

The example in (31) shows an alternation between a direct reflexive, with a 2SG subject and DO, and a parallel expression with coreference between the same subject and an oblique *lóʔō* comitative. As usual, all of the 2SG pronominal inflection is conveyed by tonal alternation.

- (31) Subject-comitative coreference

a. <i>Nkā-lintō</i>	<i>jiʔl</i>	<i>nak^wq.</i>
PFV.CAUS-go.to.waste.2SG OBJ.2SG say.3		
b. <i>Nkā-lintō</i>	<i>jy-áʔ?</i>	<i>lóʔō</i>
PFV.CAUS-go.to.waste.2SG OBJ=1SG WITH.2SG		
'You wasted yourself, he said.'		
'You wasted me with you.' [ku7wi lojo7o 17:17]		

The example in (32) shows coreference of the subject with an alienable possessor of the DO and alienable possessor of an instrumental oblique *lóʔō* in the same clause. The example in (33) shows coreference of the subject with inalienable possessors of two coordinated comitative obliques.

- (32) Coreference of subject and alienable possessors of DO and oblique

<i>Lō laa n-tāá tī nāáʔ j-nā itsáʔ ntē jy-áʔ lóʔō</i>
like.so be HAB-give TPLZ 1SG OBJ-DEF word PROX GEN-1SG WITH
<i>nu.tii jy-áʔ.</i> thought GEN-1SG

'Like so, I tell this story of mine with my thoughts.' [familia 10:46]

⁴An alternative analysis of this example is as a monotransitive clause with transitive verb of the schema [-speak] SUBJ [work] OBJ.

- (33) Coreference of subject and inalienable possessors of obliques
Ta nkā-naʔa=ūʔ tits̄e lóʔō jni?=ūʔ lóʔō lyoʔo=ūʔ.
 already PFV-see=3PL badly WITH offspring=3PL WITH spouse=3PL
 ‘They have already seen the bad with their children and with their spouses.’ [familia 12:26]

The next set of examples illustrate coreference of an inalienable possessor of the subject with a DO (34) and with an indirect object (35).

- (34) Coreference of inalienable possessor and DO
Laa? nkā-naʔa+tikáʔā tī nyáʔa=yu j-yū.
 like.so PFV-see+cherished TPLZ mother=3SG.M OBJ-3SG.M
 ‘His mother took care of him like that.’ [santa maria2 14:41]
- (35) Coreference of inalienable possessor and I.O.
Ntyūsé n-tyōtí? nakʷe lyoʔo=yu j-yū.
 god HAB-know(.3) say spouse=3SG.M DAT-3SG.M
 “God knows”, his wife said to him.’ [choo kwe7en 0:50]

4.2.2 Coreference in embedded contexts

Similar to intra-clausal coreference expressions, coreference between main and embedded clauses is achieved by simply using the appropriate referential coding device in the appropriate syntactic positions in each clause. For example, in (36) the subject of the matrix clause is coreferential with the subject of the purpose adverbial clause in the first line of the passage. In the second line of the passage, the alienable possessor of the questioned subject is coreferential with the subject of the following relative clause.

- (36) Coreference in embedded adverbial clause and relative clause
- Tyūkʷá=q [k-ako=q chaja lóʔō tī nūwq].*
 POT.sit=1INCL POT-eat=1INCL tortilla WITH TPLZ 3DIST
 ‘Let’s sit down to eat with him.’
 - Tukʷi tāká jiʔl=q [k-ako=q lóʔō]?*
 what exist GEN=1INCL POT-eat=1INCL WITH(.3)
 ‘What do we have that we can eat with him?’ [cuento DSF 7:27]

Example (37) contains a relative construction in which the head ('good medicine') is the relative clause subject and matrix clause DO. The alienable possessor of the alienable possessor (a possession chain) of the relative clause subject is coreferential with the matrix clause subject.

- (37) Coreference of subject with alienable possessor in a relative clause

Nte-lāstí=na kʷítí tsoʔō [nu nk-yuʔu jí nyatē kusū? PROG-abandon=1INCL medicine good SBD PFV-be.inside GEN person elder jiʔ̑=na].

GEN=1INCL

‘We are abandoning the good medicine that our ancestors had.’ [familia 11:05]

The subject of the matrix clause in (38) is coreferential with the inalienable possessor of the subject in the preposed object complement clause.

- (38) Coreference in matrix and complement clause

Titsé laa ntoo=chú? nkʷ-ii=chú?

badly be face=3SG.F PFV-feel=3SG.F

‘She felt that her face was very bad.’ [bruja barbona 4:23]

A more complex example is illustrated in (39). The matrix clause verb with subject enclitic occurs in final position. The object complement is a nominal predication construction. A light-headed relative clause is the nominal predicate and it is juxtaposed with a headless relative clause that functions as its subject. The subject of the matrix clause verb ‘want’ is coreferential with both the subject of the relative clause in the nominal predicate and the beneficiary in the relative clause that is the subject of the nominal predication.

- (39) Coreference in multiple embeddings

[[Tatiyá nu k-aku=q?]] [nu tyú?u jy-q?]] nch-ātī?=q?

all SBD POT-eat=1SG SBD POT.go.out.(3) DAT-1SG PROG-want=1SG

‘I want what I harvest to be all that I eat.’ [kuna7a kusu7 5:44]

The preceding examples illustrate that speakers of Zenzontepec Chatino use complex constructions in which multiple clausal embeddings may occur, and coreference is tracked through these structures the same way that coreference is expressed intra-clausally: coreferential coding devices occur in the relevant positions in the same way non-coreferential coding devices would.

5 Middles, reciprocals, and intensifiers

Cross-linguistically, reflexive markers show tendencies to overlap with the markers for middle voice (Kemmer 1993), reciprocal expressions (Maslova 2008; Heine

& Miyashita 2008), and what are referred to as intensifiers (König & Siemund 2000). In Zenzontepec Chatino, none of these constructions share a marker with reflexive expressions because reflexives have no dedicated marker in the first place.

5.1 Middle voice

The correlate of a middle voice construction in Zenzontepec Chatino at least shares with reflexive expressions the fact that it is an UNCODED valency pattern (Haspelmath & Hartmann 2015: 65), that is, there is no specific marker on the verb, or any marker at all, that indicates that the construction is a middle voice one. Like most of the valence alternations in the language (Campbell 2015), it is highly unproductive, only occurring with a few verbs: the verbs of ingestion, like ‘eat’ (40) and ‘drink’ (41).

- (40) Middle voice with ‘eat’

jā nu.ntē tsoʔō nt-aku
CONJ 3PROX good HAB-eat(.3)

‘this (fruit) is tasty’ (lit. ‘this (fruit) eats well’) [familia 12:58]

- (41) Middle voice with ‘drink’

a. *Nt-u-nuʔu jiʔl na lúkʷi=V?*
HAB-CAUS-get.ruined(.3) OBJ DEF mezcal=ANA

‘It (water with no sweetness) ruins the mezcal.’

b. *Leʔ yoō? ntī-ʔyó tiʔi chini.*
then disgusting HAB-drink(.3) flavor smoke

‘Then it (the mezcal) drinks disgustingly with a smoke flavor.’ [lukwi proceso 6:18]

5.2 The reciprocal construction

Unlike reflexives, the reciprocal construction in Zenzontepec Chatino has a distinct marker. In the reciprocal construction, the form *tyáʔā* ‘companion, relative’ is encliticized to the verb base, and there is no longer a grammatical direct object, that is, the clause becomes syntactically intransitive. A basic transitive clause with the verb ‘kill’ is shown in (42), followed by a reciprocal construction involving the same verb.

(42) Reciprocal alternation

a. Basic transitive clause

Nt-ujwi tī kʷaa j-nuwēʔ? lóʔō kētq.

HAB-kill TPLZ 1INCL OBJ-3ANA WITH rifle

'We would kill those (macaws) with rifles.' [animales desaparecidos 0:46]

b. reciprocal construction

Nku-tyejnā nt-ujwi=tyáʔā tī úʔwi?

PFV-begin HAB-kill=RECP TPLZ 3PL.ANA

'They started to kill each other.' [maldicion 1:10]

The form *tyáʔā* whence the reciprocal marker has grammaticalized is an inalienably possessed noun, meaning 'companion', 'family', or ' sibling', a cross-linguistically relatively common source for reciprocal markers (Heine & Miyashita 2008: 178). The example in (43) shows the form as a noun in a comitative noun phrase, and the example in (44) shows the noun in direct object function, a bridging context in which the clause can be interpreted either with disjoint reference of the DO and subject or with reciprocal reference.

(43) The form *tyáʔā* 'companion' as a noun

Ná kʷēyáʔ xī nte-tākqéʔ=na lóʔō kʷiti? lóʔō tyáʔā=na.

NEG measure SBD PROG-suffer=1INCL WITH brother and companion=1INCL

'What we are suffering with our brothers and companions is immeasurable.' [ntelinto itza7 2:43]

(44) Likely bridging context of grammaticalization of reciprocal =*tyáʔā*

Nkā-sāʔqé=ya j̄l tyáʔā=ya.

PFV.CAUS-be.attached=1EXCL OBJ companion=1EXCL

'We take responsibility for our companions.'

'We take responsibility for each other.' [ntelinto itza7 22:01]

5.3 Intensifiers

Zenzontepec Chatino has two forms that may function as intensifiers. These are not part of the canonical reflexive construction of the language (§4.1), but they may co-occur with or reinforce reflexives. The first is *lákʷi?*, an adjective-like form that can mean 'one's own' (45) or 'the same ones' (46), as well as having an intensifier function in which a particular – either surprising or especially important – referent is indicated (47).

- (45) *lákʷi?* meaning ‘one’s own’
Kejé tsq? lákʷi?=yu nti-níjnyá=yu nu nt-una=yu kitse.
 skin back own=3SG.M HAB-use=3SG.M SBD HAB-twist=3SG.M fiber
 ‘He would use his own leather when he would twist maguey fiber (into
 twine).’ [maclovio 2:09]
- (46) *lákʷi?* meaning ‘the same ones’
Lákʷi?=jú? ntye?e=jú? nti-ka+kú?wi=jú?.
 same=3PL HAB.be.located=3PL HAB-be+drunk=3PL
 ‘They are the same ones that are there and get drunk.’ [ntelinto itza7
 12:04]
- (47) *lákʷi?* used as an intensifier
wí ntyōti? tí lákʷi?=ú? tula nakʷe ló?ó x-itsá?=ú?
 and HAB.know TPLZ INT=3PL what say.(3) WITH POSS-word=3PL
 ‘and they themselves know how to say (it) with their language’
 [historia3 15:30]

The passage in (48) illustrates the use of the intensifier *lákʷi?* to provide contrast and reinforce the coreference of an otherwise canonical reflexive expression.

- (48) *lákʷi?* as an intensifier reinforcing a reflexive construction
Nyá?a=yu nkā-línto j-yú?
 mother=3SG.M PFV.CAUS-go.to.waste(3) OBJ-3SG.M
 ‘So his mother killed him?...
?a nu lákʷi?=yu nkā-línto=yu j-yú?
 Q SBD INT=3SG.M PFV.CAUS-go.to.waste=3SG.M OBJ-3SG.M
 ...or he himself killed himself?’ [santa maria2 14:34]

The other Zenzontepc Chatino intensifier is *kʷi?ya* ‘alone’, which on its own may function as an adjective, as in the negated adjectival predication in (49) and the depictive secondary predicate in (50). It may also function as an adverb encliticized to a verb, either as a manner adverb (51) or an intensifier reinforcing a reflexive expression (52).

- (49) *kʷi?ya* as adjectival predicate
Náxí?i kʷi?ya=ú? nka-?ne=ú? jí nkā.
 is.not alone=3PL PFV-do=3PL OBJ(3) PST
 ‘It was not alone that they did it (the work) before.’ [antes aparatos 11:05]

- (50) Unbound *kʷiʔya* meaning ‘alone’
Kʷiʔya=ri=q nte-líntoo=q j-nā.
 alone=only=1INCL PROG-go.to.waste=1INCL OBJ-1INCL
 ‘Alone one is wasting oneself away.’ [historia3 22:19]
- (51) *kʷiʔya* as adverbial enclitic on the verb
Nka-ʔne+tsáʔq=kʷiʔya=ri tī úʔwi? lō.laa nte-ʔne tselā.yuu.
 PFV-do+study=alone=only TPLZ 3PL.ANA how PROG-do world
 ‘They just studied alone what nature was doing.’ [luna siembra 2:56]
- (52) Enclitic *kʷiʔya* reinforcing a reflexive
Nte-ʔne+lóʔō=kʷiʔya=ri=q j-nā.
 PROG-do+WITH=INT=only=1INCL OBJ-1INCL
 ‘We ourselves are making ourselves suffer.’ [familia 0:51]

As König & Siemund (2000: 68) point out, “intensifiers may be completely identical to reflexives, they may provide the source for the development of reflexives, and they may combine with reflexives” in different languages. In Zenzontepec Chatino, the intensifiers are not part of the expression of canonical reflexives, nor are they the source of any reflexive marker. They may, however, reinforce coreference, but that is only one of a range of functions displayed by each of the two intensifiers.

6 Conclusions

Zenzontepec Chatino presents a typologically interesting case for the cross-linguistic study of reflexives and coreference. While most languages display a reflexive construction in which the “co-referential direct object is not repeated in the sentence but is either (i) replaced by the reflexive pronoun [...] or (ii) removed from the original structure” (Kulikov 2013: 268), the Zenzontepec Chatino correlate of a canonical reflexive expression employs neither of these strategies. In fact, Zenzontepec Chatino has no reflexive construction that meets the cross-linguistic comparative concept as defined by Haspelmath (2023 [this volume]) in which at least two clausal participants are coreferential, and in which some grammatical marker signals that there is such coreference. In lieu of a specific reflexive construction or reflexive marker, Zenzontepec Chatino expresses reflexives and other types of intra- and inter-clausal coreference by means of the language’s standard referential coding devices (NPs, independent pronouns, dependent pronouns, anaphoric zero) in the relevant grammatical relations that

share the coreference. This uncommon strategy is also reported for a couple of varieties of the related Zapotec languages (Antonio Ramos 2015: 53; Lee 2003: 88). Where referential ambiguity could arise, speakers can use a demonstrative emphatic pronoun for signaling disjoint reference or an intensifier for reinforcing coreference.

While in many languages middle voice, reciprocal constructions, and intensifiers overlap with or share features with reflexive constructions, this is not the case in Zenzontepec Chatino. The language only sparsely uses a likewise uncoded middle voice alternation, and it presents a distinct and specialized reciprocal construction with the marker *tyáʔā* ‘companion’, which has cognate structures and markers in related Chatino (Rasch 2002: 71) and Zapotec (Lee 1999: 91; Munro 2015) languages, as well as more distantly-related Mixtec varieties (Shields 1988: 344; Zylstra 1991: 47). Zenzontepec Chatino has two forms that function as intensifiers, among other functions, neither of which has grammaticalized into any reflexive marker, but which may be used to reinforce unexpected or important coreference relations in otherwise canonical reflexive expressions.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ADJZ	adjectivizer	INCL	inclusive (1PL)
ANA	anaphoric demonstrative	INT	intensifier
CONJ	conjunction	ITER	iterative
HAB	habitual aspect	ITRN	intransitivizer

NEUT	neutral gender	TPLZ	topicalizer
POT	potential mood	TRN	transitivizer
RSP	respectful (pronoun)	WITH	oblique (comitative or instrument)
SBD	subordinator		

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Chapter 25

Reflexive constructions in Hoocąk

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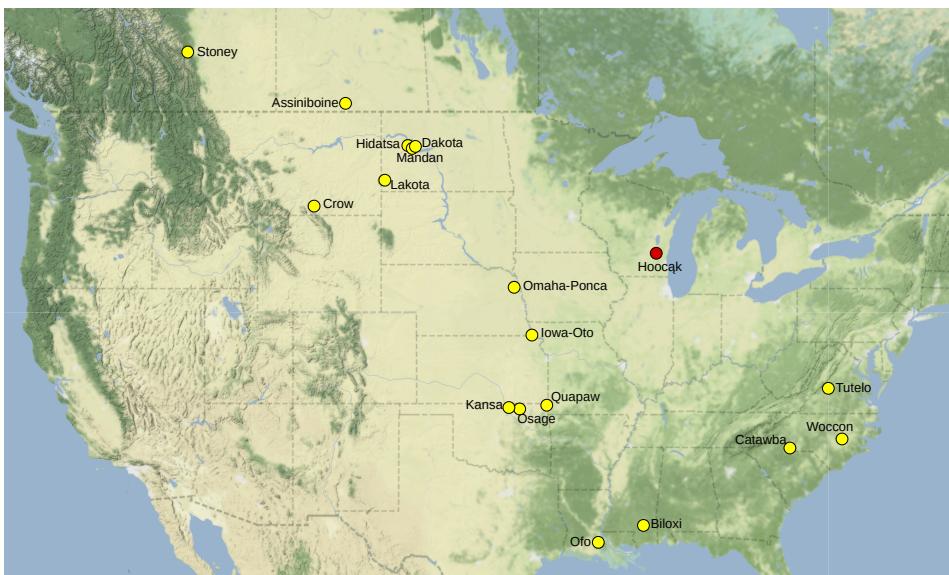
Hoocąk is a North American Indian language of the Siouan language family still spoken by some elders in Wisconsin. From a typological point of view, Hoocąk is an active/inactive language with strong head marking properties on the clause level. This means, that the arguments of the clause are filled by pronominal affixes on the verbal predicate. Reflexive scenarios are marked morphologically by a special verbal prefix. Reflexive scenarios are not marked by free personal pronouns or reflexive pronouns – both classes of pronouns are not available in Hoocąk. The present contribution investigates the polysemy of the reflexive marker in Hoocąk, its use with introverted and extroverted verbs, the possibilities to express partial reflexivity, coreference of the subject (A) argument with other semantic roles than the patient (O) argument, and the constructional contrast between coreference and disjoint reference, between object and nominal adpossessor, and between exact and inclusive coreference.

1 Some basics of Hoocąk morphosyntax

Hoocąk is an indigenous language of North America that belongs to the Mississippi Valley group of the Siouan language family, see Figure 1. Hoocąk (also called Ho-Chunk) is a highly endangered language still spoken by approximately a hundred elderly speakers in Wisconsin.

Hoocąk is grammatically quite distinct from better known European languages. The verb is morphologically highly complex with a remarkable wealth of morphological positions before and after the verbal root (see further below).





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Figure 1: Location of the Hoocák language among the other Siouan languages

From a syntactic point of view, the most remarkable property of Hoocák is the way core arguments of the clause are encoded grammatically. Arguments of the verbal predicate are represented morphologically by means of pronominal affixes. A pronominally inflected verb in principle represents a complete clause, and lexical NPs are not grammatically necessary, either with a nominal or with a pronominal head; see (1).

- (1) *wasgerá hakaráixuxšqnq*
wasge=ra Ø-ha-kara-gíxux=šqnq
dish=DEF OBJ.3SG-1E.A-POSS.REFL-break=DECL
'I broke my dish.' (White Eagle 1988: 14)

The verbal predicate at the end of the clause in (1) contains two pronominal prefixes, the 3rd person singular object [Ø-] followed by the 1st person singular actor (A) prefix *ha-*. The object prefix refers to the referent of the NP *wasge=ra* 'the dish', the actor prefix to the speaker. The declarative enclitic =šqnq is not obligatory and marks the entire clause as a statement. The possessive reflexive marker *kara-* [POSS.REFL] indicates that the referent of the A argument owns the

referent of the U argument.¹ The NP ‘the dish’ may be dropped without affecting the grammaticality of the clause. Note also that the syntactic function of the two arguments in (1) is exclusively marked by the pronominal affixes on the verb. There is no case marking of the noun, and word order would not help in this case either.

There are up to seven prefix slots the verb has that may be filled with different kinds of grammatical prefixes; see Table 1 for an abstract overview.

Table 1: Template presentation of prefixes of the Hoocak verb (cf. Helm-brech & Lehmann 2008)

Morphological slot	Function
-7	pronominal prefixes I
-6	outer applicatives (instrument and locative)
-5	outer instrumentals
-4	pronominal prefixes II (Undergoer and Actor)
-3	benefactive applicative, reflexive marker (<i>kii-/ki-</i> [REFL]), reciprocal marker (<i>kii-/kiki-</i> [RECP]), possessive reflexive marker (<i>kara-/kV/k-</i> [POSS.REFL])
-2	pronominal prefixes III
-1	inner instrumentals
0	verbal root
1–n	suffixes/enclitics

There are pronominal prefixes that index the core arguments S_A , S_U , A, and U of the clause (labelled pronominal prefixes I–III with slots -7/-4/-2 in Table 1).

¹The terms “A argument” and “U argument” are taken from Role and Reference Grammar (Van Valin & LaPolla 1997; Van Valin 2013), where they are defined as macro-roles, i.e. as generalized semantic roles that subsume various different and more specific agent-like and patient-like semantic roles. I use these terms here to refer to the two different paradigms of person affixes for intransitive verbs in Hoocak and the arguments of a transitive verb that are filled by person affixes of these paradigms. The A paradigm is required for intransitive verbs that designate actions, the U paradigm is required for verbs that designate states, properties and uncontrolled processes. In addition, I use these terms here to refer to the first argument of a transitive verb, the A argument, and the second argument of a transitive verb, the U argument, because these arguments are filled with person affixes of the respective A and U paradigms. Note that, because of valence increasing morphological processes, there may be more than one U argument in a verb, which is a particularity of Hoocak. In these cases, I distinguish the two U arguments of a verb terminologically as e.g. “patient U argument”, or “recipient U argument”, or “benefactive U argument”.

There are four different applicative prefixes that augment the valency of the verb stem (the outer applicatives and the benefactive applicative in Table 1). There are eight so-called instrumental prefixes that enrich and specialize the semantics of the verb (similarly labelled outer and inner instrumentals in Table 1), and there is a reflexive and a reciprocal marker, which mark the identity of the actor (A) and undergoer (U) of a transitive verb (both in the morphological slot -3 in Table 1).

The reflexive marker *kii-* signals that the referent of the A argument is identical with the referent of the U argument. In this case the U argument is never marked separately by a pronominal prefix. The same reflexive marker may also have a reciprocal meaning if the A argument is plural. This holds for 1st and 2nd persons as well as for 3rd persons. In addition, A and U 3rd person arguments always have a disjoint reference if there is no reflexive marker. Compare the examples in (2).

- (2) a. *hajánq*
ha<Ø-Ø>já=nq
<OBJ.3SG-SBJ.3SG>see=DECL
'He₁ sees him₂.' [DL XI: 15]
- b. *hakijánq*
*ha<Ø>**ki**-já=nq*
<SBJ.3SG>REFL-see=DECL
'He₁ sees himself₁.' [DL XI: 15]

There is no way to interpret the two arguments in (2a) as coreferential. If coreference between the two arguments is intended, the reflexivizer *kii-* [REFL] has to be used; see (2b). The reflexive marker *kii-* may also be interpreted with a reciprocal meaning in case the A argument is a non-singular referent. In this function, *kii-* competes with the reduplicated form *kiki-* that always marks reciprocal meaning (see 6–7 below).

In addition, there is a possessive reflexive marker indicating a possessive relation between the A and the U argument (previously illustrated in 1 above). This form will be discussed in §5.1 below.

Some further comments on the pronominal prefixes are necessary. Although there are three morphological slots of pronominal prefixes, there are in fact only two different paradigms of pronominal affixes, one indicating the person category of the S_A argument, i.e. the intransitive subject of a verb with active semantics, and the second one indicating the person category of the S_U argument, i.e. the intransitive subject of a verb with inactive semantics. This marking pattern is lexically fixed for each intransitive verb. Compare the paradigm of personal affixes for intransitive inactive verbs such as *š'aak* 'be old' in Table 2 and for

intransitive active verbs such as *šgáac* ‘play’ in Table 3. Intransitive active verbs designate controlled movements like ‘come’, ‘go’, ‘arrive’, ‘swim’ etc., and actions such as ‘dance’, ‘get dressed’, ‘travel’, etc. Inactive intransitive verbs designate properties like ‘be red’, ‘be big’, ‘be strong’ etc., and uncontrolled processes such as ‘float’, ‘boil’, ‘slip’, etc.

Table 2: Paradigm of the intransitive inactive verb *š'áak* ‘to be old’

1SG	<i>hj-š'ák</i>	‘I am old’
2SG	<i>nj-š'ák</i>	‘you are old’
3SG	<i>Ø-š'ák</i>	‘he is old’
1I.DU	<i>waqgá-š'ák</i>	‘you and I are old’
1I.PL	<i>waqgá-š'ák-wi</i>	‘we (incl.) are old’
1E.PL	<i>hj-š'ák-wi</i>	‘we (excl.) are old’
2PL	<i>nj-š'ák-wi</i>	‘you (all) are old’
3PL	<i>š'ák-ire</i>	‘they are old’

Intransitive active verbs designate controlled movements like ‘come’, ‘go’, ‘arrive’, ‘swim’ etc. and actions such as ‘dance’, ‘get dressed’, ‘travel’, etc.

Table 3: Paradigm of an intransitive active verb

1SG	<i>ha-šgáč</i>	‘I play’
2SG	<i>ra-šgáč</i>	‘you play’
3SG	<i>Ø-šgáac</i>	‘he plays’
1I.DU	<i>hj-šgáč</i>	‘you and I play’
1I.PL	<i>hj-šgáč-wi</i>	‘we (incl.) play’
1E.PL	<i>ha-šgáč-wi</i>	‘we (excl.) play’
2PL	<i>ra-šgáč-wi</i>	‘you (all) play’
3PL	<i>šgáac-ire</i>	‘they play’

The A (transitive subject) and the U (transitive object) arguments of transitive verbs are filled by a combination of pronominal affixes from both paradigms. Hoocák is thus a head-marking language on the clause level and belongs to the so-called split-S marking type. It has to be stressed that this marking pattern, also called active/inactive alignment type, holds only for 1st and 2nd persons (speech act participants); see Figure 2 (Hartmann 2013: 1268).

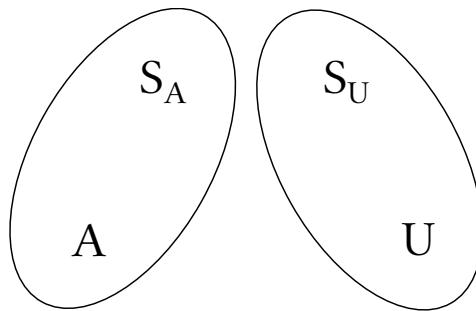


Figure 2: Active/inactive alignment (for 1st and 2nd persons)

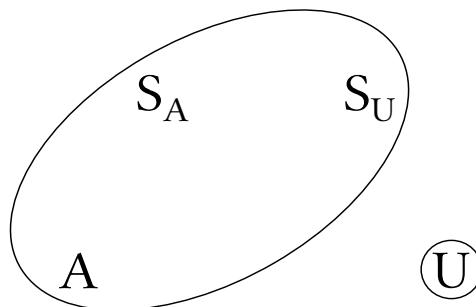


Figure 3: Accusative alignment (for 3rd persons)

Third persons show accusative alignment, i.e. S_A , S_U and A are in all cases coded identically, either by the [3SG] zero form \emptyset or the [3PL] form $-ire$, see Figure 3. The transitive object U is marked either by a zero form for [3SG] or by a special pronominal affix $wa-$ [OBJ.3PL] for 3rd person plural objects. Note that this special form $wa-$ [OBJ.3PL] is used only if the U argument is definite.

The right side of the verb root is likewise morphologically complex, but in a very different way. There are a few suffixes and a large number of enclitics that appear in a fixed order after the verb root. These bound forms designate tense, aspect, and mood categories and are generally less grammaticalized than the prefixes. One manifestation of this is the fact that the prefixes are highly synthetic and undergo plenty of morphophonemic processes, while the suffixes and enclitics are rather agglutinating and stable with regard to their phonological form.

While verbs are easy to identify based on their morphology, nouns are problematic in this respect. There is no noun-specific morphology such as case marking, number marking or gender. Nouns can be identified by their semantics and

by their structural and distributional properties, especially as heads of nominal expressions.

The order of the major clausal constituents is quite regular, exhibiting SOV order in traditional terms. The predicate is strictly clause final. Other constituents such as argument NPs, adverbials, and subordinate clauses precede the predicate, but may show different orders depending on pragmatic factors (see Helmbrecht 2021).

The outline of the present study follows the structure of the questionnaire that was provided by the editors of this volume (Janic & Haspelmath 2023 [this volume]). In §2, the polysemy and the uses of the reflexive marker in Hoocak are introduced. It will be shown that complete as well as partial coreference of the person/number values of the A and the U arguments require obligatorily the reflexive marker. In addition, some of the partial coreference combinations are not possible at all even with the reflexive marker. In §3, the emphatic use of the reflexive marker is illustrated before the reflexive scenarios with body parts are investigated in §4. The subsections in §5 are dedicated to coreference relationships with other semantic roles such as possessor (§5.1), locational participants (§5.2), and beneficiaries/recipients in (§5.3). In §6, it is argued that there are no coreference relations between non-subject arguments because Hoocak has no adpositions. In §7, the constructional contrast between object and nominal adpossession is illustrated, and in §8, it is demonstrated that there are no constructions for inclusive coreference in Hoocak, again, because Hoocak does not have free personal pronouns as can be found in European languages.

2 Basic uses of the reflexivizer

There are no reflexive pronouns in Hoocak (like English *himself*), and reflexive scenarios are never expressed by personal pronouns such that there are coreferential A and U personal pronouns both inflected by the corresponding cases. Hoocak has only two personal pronouns (*nee* 1st and 2nd person, and *'ee* 3rd person), which are not case marked, and which are used exclusively for emphatic reasons in specific focus constructions. Instead, Hoocak has one verbal reflexive marker *kii-*, which indicates coreference of the U with the A argument. A second and closely related meaning of the reflexivizer *kii-* is the reciprocal meaning. In addition, this reflexivizer may be reduplicated in order to express explicitly a reciprocal meaning *kiki-* [RECP]. The relationship between these two forms – *kii-* [REFL] and *kiki-* [RECP] and the two meanings reflexive and reciprocal – will be illustrated in the subsequent sections.

Reflexivization is usually seen as a detransitivizing operation, not necessarily in terms of a structural syntactic transitivity, but from the point of view of transitivity as a prototype notion (cf. Hopper & Thompson 1980). The action is less transitive, because the undergoer, who is the endpoint of the action, is the same as the actor, i.e. there is only one true independent participant. Reflexive verbs are therefore often grammatically treated as detransitivized verbs in one way or another in the languages of the world. In Hoocák, reflexivization is clearly a detransitivizing process. Formally, this is manifest by the blocking of the U pronominal affixes. Only the A argument is marked by a person prefix. A typical example of a reflexive construction is given in the following utterance from the DOBES corpus of Hoocák texts.²

- (3) *Hqake huŋkišgacnikjawi.*
hąke h̥-ho<kii>šgac=n̥i=kje-wi
NEG.IN 1I.A-<REFL>abuse=NEG.FIN=FUT-PL
'Let's not abuse ourselves.' [ECO027]

The transitive verb *hošgac* 'to abuse someone' in (3) has an A and a U argument in its argument structure. The reflexivizer *kii-* indicates that the referent of the U argument is identical to the referent of the A argument. The latter is marked by a pronominal affix *h̥i-* (1st person inclusive actor [1INCL.A]) and the plural marker for 1st and 2nd persons *-wi* [PL] at the end. The future marker *=kje* has to be interpreted as a hortative in this context.

In Hoocák, the reflexive prefix *kii-* can, in principle, be used with every transitive verb if its semantics allows such a derivation, i.e. it must be possible that the action of the verb can be exerted on oneself. In most cases, the agent A argument is coreferential with the patient U argument of the transitive verb; but other coreference relations are possible (see §5 below).

The patient U argument is the first target of the reflexivizer, and this does not change, even if there are other U arguments around. These other U arguments could be introduced into the argument structure of the verb by means of

²Data for this study come from a large digital corpus of Hoocák text, which were collected as a part of the DOBES funding of the Volkswagen Foundation (<http://dobes.mpi.nl>). The glossed texts and the audio and video files of the Hoocák documentation project are stored in the digital archive of the Max Planck Institute for Psycholinguistics called "The Language Archive" (<http://dobes.mpi.nl/projects/hocank>). The DOBES project "Documentation of the Hoocák Language" was led by Johannes Helmbrecht and Christian Lehmann at the University of Erfurt, Germany. The data taken from the Hoocák corpus are supplemented by data elicited by the author during various field trips to Wisconsin between 1997 and 2007. Abbreviations such as ECO027 specify the text from which the example is taken (here the "Ecology speech") as well as the number of the utterance (here number 027).

an applicative marker. There are four different applicative markers in Hoocak, a superessive, an inessive, an instrumental and a benefactive applicative marker, which have in common that they open a new undergoer argument slot in the verb. These semantically different undergoer arguments can be wholly or partly coreferential with the A argument (see §5 below). This is, however, not possible with an additional instrumental U argument, certainly for semantic reasons. In this case, the coreference remains between agent (A) and patient (U); see example (4)³ below. It is hard to imagine a situation in which the instrument is coreferential/identical with the actor of this action.

- (4) *Maqhipahi himaqkicgisšqnq.*
 mąhı-paahi hi-maq-∅-ha-ki-cgis=šanq
 knife-be_sharp APPL.INST-CUT-3SG.U-1E.A-REFL-CUT=DECL
 'I cut myself with a sharp knife.' (Hartmann 2013: ex. 216)

Similar semantic restrictions apply to verbs that designate an action that cannot be exerted on the actor her/himself. For instance, the reflexivizer *kii-* cannot be used with the transitive verb *ru'q* 'to carry something' 'to lift something', with a reflexive meaning, because it is pragmatically not possible to lift oneself, or to carry oneself, at least in the literal sense. Despite this pragmatic constraint, *ru'q* 'to carry someone' can be marked with *kii-* yielding a reciprocal meaning 'each other'. This reciprocal use is only possible with a plural A argument. For instance, *kii-ru'q-ire* would mean 'they carry each other'.

The same holds for the transitive verb *hoki'ú* 'to imitate something/someone'. This verb cannot receive a reflexive meaning, because it is not literally possible to imitate oneself. However, this verb may receive a reciprocal meaning by adding *kii-* such that it becomes *ho-ki-kí'ú-ire* 'they imitate each other'. Note that in this case, the single *kii-* has likewise a reciprocal meaning. The middle syllable /ki/ in *hoki'ú* is part of the stem. (It may well be that it is the historically lexicalized reflexivizer *kii-*.)

As is often the case in the Hoocak lexicon, otherwise productive derivational means are frequently found in words where they are fossilized as part of the stem. This holds for the reflexive marker *kii-*, too. In these cases, the addition of *kii-* results in verbs with a morpheme sequence *kiki-*, which can be interpreted as reflexive or reciprocal. For instance, in the transitive verb *hiki'ó* 'to touch something', the *kii-* form in the middle is part of the stem and cannot be interpreted as

³The Hoocak data collected by Iren Hartmann (2013) can be found on the website of the Valency Patterns Leipzig project (Hartmann et al. 2013) at the Max Planck Institute for Evolutionary Anthropology (<http://www.valpal.info/languages/hoocak>).

a reflexive marker. If the *kii-* is added as in *hikiki'o*, a polysemous verb emerges. The first meaning is – as one expects – ‘to touch oneself’, the second meaning is the reciprocal meaning ‘to touch each other’, and the third meaning is ‘to touch something repeatedly’. Reduplication in Hoocák can be utilized to indicate iterativity, thus the addition of *kii-* may simply be interpreted as a mere reduplication of the middle syllable of the stem.

Another example of this sort is *hokit'é* ‘to talk to someone’. The *kii-* part in the middle is lexicalized and has no reflexive meaning. *Yaakit'é* would be ‘I speak to someone’ and not *‘I speak to myself’. However, to make it reflexive, one can insert *kii-* [REFL] and gets *yaa-ki-kit'e* ‘I speak to myself’. Another verb that cannot receive a reflexive meaning with *kii-* [REFL] is the verb provided in (5a–5b).

- (5) a. *hat'qp* ‘to jump on something’
b. *ha-ki-t'qp* ‘to jump on each other’

The reflexive marker *kii-* in (5b) cannot be interpreted as ‘to jump on oneself’ for pragmatic reasons. Therefore it is interpreted as reciprocal, which again demonstrates the close semantic relationship between both meanings. The semantic extension from reflexive to reciprocal is conceptually easy, the polysemous encoding of reflexive and reciprocal meanings is therefore widespread among the languages of the world (Maslova & Nedjalkov 2013).

The reciprocal usage of the *kii-* reflexive marker sometimes competes with the reciprocal marker *kiki-* [RECP], which is a reduplication of the reflexive marker *kii-*. The reciprocal marker *kiki-* [RECP] is used only if the meaning of the reflexivizer *kii-* is ambiguous, and only the reciprocal meaning is intended, or if the speaker wants to particularly stress the reciprocal meaning; cf. the examples in (6–7).

- (6) a. *hajá* ‘to see something’
b. *hakijá* ‘to see oneself’
c. *haakícaanq*
ha<ha-kí>ca=nq
see<1E.A-REFL>see\1E.A=DECL
‘I see myself (e.g. in the mirror).’ [DL XI:15]
d. *'eejá haakíkicawiinq*
'eejá ha-<ha-kíki>ca-wi=nq
there <1E.A-RECP>see\1E.A-PL=DECL
‘We see each other there (in the mirror).’ [DL XI:15]

- (7) *heg̣u nqacge hąqke pii hąqke hijkijawini*
 heg̣u naçcge hąqke pii hąqke <hi>-ha-<kii>-ja-wi=nj
 that_way heart NEG.IN be_good NEG.IN <1I.A><REFL>see-PL=NEG.FIN
hinųbahąqňa
 hi-nųüp-ahą=ra
 ORD-two-times=DEF

‘We never see each other with good hearts anymore.’ [DAP107]

The transitive verb *hajá* ‘to see something’, (6a), may infix the reflexivizer *kii-* yielding a reflexive meaning ‘to see oneself’, (6b); see also the inflected example in (6c) for the 1st person. The reflexivizer may also receive a reciprocal meaning with this verb if A is pluralized; see (7). If there is some doubt, and if the reciprocal meaning is intended, the reflexivizer may be reduplicated to underline that only the reciprocal interpretation is intended; see (6d).

Transitive verbs are inflected for person by a combination of forms from the A paradigm and the U paradigm. The general morphological pattern is that the U form precedes the A form, but some exceptions apply. First, the first inclusive dual and plural A form *hi-* [1INCL.A] always precedes all other prefixes of the verb. Secondly, there is a portmanteau prefix *nii-* for the 1st person acting on a 2nd person (1&2) that does not allow a further segmentation. The general and schematic paradigm of pronominal affixes for a transitive verb form of the first and most regular conjugation is given in Table 4 (cf. Helmbrecht 2021).

Table 4 covers all combinations of person/number values of the A and U arguments that are in principle possible. Most of the pronominal affixes precede the verb root (V), but the plural marker *-wi* [PL] for 1st and 2nd persons, and the subject 3rd person plural marker *-ire* [SBJ.3PL] follow the verb root. The white cells with a hyphen in Table 4 indicate that this combination of person/number values cannot be expressed by the corresponding person affixes in Hoocąk. These white cells have in common that the referent of the A argument is completely coreferential, or partially coreferent, with the referent of the U argument. Some of these “white” reflexive scenarios can be expressed with the pronominal affix of the A argument and the reflexive marker *kii-*. Others cannot be expressed at all with pronominal affixes. I will illustrate some of these restrictions briefly.

The transitive verb *mqqcgis* ‘to cut something (with a cutting instrument like a scissor)’ consists of the bound verb root *-cgis* ‘cut something’ and the instrumental prefix *mqq-* that adds a manner/instrument meaning to the lexical meaning of the verb root (such as ‘with a knife/with a pair of scissors’, or the like). Note that this instrumental prefix does not provide a new argument slot to the verb root.

Table 4: Transitive paradigm of person markers (first conjugation)

A		U		
	1SG	2SG	3SG	1INCL.DU
1SG	-	<i>nij</i> -V	\emptyset -ha-V	-
2SG	<i>hi</i> -ra-V	-	\emptyset -ra-V	-
3SG	<i>hi</i> - \emptyset -V	<i>nij</i> - \emptyset -V	\emptyset - \emptyset -V	<i>wqagá</i> - \emptyset -V
1INCL.DU	-	-	<i>hi</i> - \emptyset -V	-
1INCL.PL	-	-	<i>hi</i> - \emptyset -V-wi	-
1EXCL.PL	-	<i>nij</i> -V-wi	\emptyset -ha-V-wi	-
2PL	<i>hi</i> -ra-V-wi	-	\emptyset -ra-V-wi	-
3PL	<i>hi</i> -V-ire	<i>nij</i> -V-ire	\emptyset -V-ire	<i>wqagá</i> -V-ire
1INCL.PL		1EXCL.PL	2PL	3PL
1SG	-	-	<i>nij</i> -V-wi	<i>wa</i> -ha-V
2SG	-	<i>hi</i> -ra-V-wi	-	<i>wa</i> -ra-V
3SG	<i>wqagá</i> - \emptyset -V-wi	<i>hi</i> - \emptyset -V-wi	<i>nij</i> - \emptyset -V-wi	<i>wa</i> - \emptyset -V
1INCL.DU	-	-	-	<i>hi</i> -wa-V
1INCL.PL	-	-	-	<i>hi</i> -wa-V-wi
1EXCL.PL	-	-	<i>nij</i> -V-wi	<i>wa</i> -ha-V-wi
2PL	-	<i>hi</i> -ra-V-wi	-	<i>wa</i> -ra-V-wi
3PL	<i>wqagá</i> -V-ire-wi	<i>hi</i> -V-ire-wi	<i>nij</i> -V-ire-wi	<i>wa</i> -V-ire

Reflexive events such as ‘I cut myself’ or ‘you cut yourself’ etc., see (8a⁴ and 9a) cannot be expressed by a combination of the respective A and Upronominal affixes. Instead, the A prefix *ha-* [1E.A] has to be used plus the reflexive marker *kii-*, which indicates the coreference of A and U; see (8b and 9b). The coreferential U argument is not marked at all.

- (8) a. * *mqa-hi-ha-cgis*
 by_cutting-1E.U-1E.A-cut
 ‘I cut myself (with a cutting instrument like a scissor).’ [PM XI:19]
- b. *máqkicgis*
 mqq-ha-ki-cgis
 by_cutting-1E.A-REFL-cut
 ‘I cut myself (with a cutting instrument like a scissor).’ [PM XI:19]

⁴Underlying /h/ in *ha-* [1E.A] and *hi-* [1E.U] always drop word internally.

- (9) a. * *mqa-ni-ra-cgis*
 by_cutting-2U-2A-cut
 ‘You cut yourself (with a cutting instrument like a scissor).’ [PM XI:19]
- b. *mqa-näkicgi*
 mqa-ra-ki-cgis
 by_cutting-2A-REFL-cut
 ‘You cut yourself (with a cutting instrument like a scissor).’ [PM XI:19]

The examples in (8–9) represent reflexive events, in which the referent of A (1st and 2nd singular) is fully identical to the referent of U. If A is a 3rd person singular (zero marked Ø- 3SG), the reflexive marker indicates that A and U are coreferential. If there is no reflexive marker, we have a normal transitive construction with two zero-marked 3rd person arguments with different referents (see 2a–2b above).

Things are more complicated if plural referents are involved. Hoocak has three different 1st person plural markers, 1st person dual inclusive (you and me [1INCL.DU]), 1st person plural inclusive (we all including you [1INCL.PL]), and 1st person plural exclusive (we all, but not you [1EXCL.PL]). These A forms can be combined with the reflexive marker *kii-* with the result that the respective 1st person non-singular group is an A and U argument at the same time. The inclusive/exclusive distinction is maintained. However, there is a systematic polysemy in the way that either each member of the group acts on himself/herself, or that the members of this group act on each other; a reciprocal meaning.

What is not possible to express pronominally in Hoocak is that a 1st person non-singular group acts on the 1st person singular, with or without the reflexivizer. English does not allow this scenario either (**we see myself/me in the mirror*); see Hampe & Lehmann (2013). The inverse situation with a 1st person singular acting on a 1st person non-singular is, however, possible in English: *I see us in the mirror*. No matter whether *us* is interpreted as an inclusive plural or an exclusive plural, it is a kind of partial reflexive situation, which is not marked as reflexive. Hoocak cannot express this situation with its pronominal affixes and the reflexivizer. Therefore, it is marked white plus hyphen in Table 4. We have a similar situation with the 2nd person singular as A argument. Hoocak does not allow a 2SG.A acting on a 1st person inclusive non-singular [1INCL.DU/PL.A]. The English equivalent sounds odd, too: ?*You [SG] see us in the mirror* (including yourself). If the 1st plural pronoun *us* is interpreted as exclusive, it is no longer odd. Then it is no longer a reflexive construction in English and in Hoocak.

The reflexive *kii-* derivation is generally not possible with intransitive active and inactive verbs. There are no such reflexive formations as ‘something breaks by itself’ (**kiišižre*) or ‘something is cooked for oneself’ (**kiič*).

3 Emphatic meaning of the reflexivizer

The reflexivizer may be used to express emphasis, which is comparable to some uses of English reflexive pronouns. Compare the examples in (10–11) from different texts.

- (10) *hegū waicekji wa'ųqježe*
hegū wa<hi>cek=xjì wa<ha>'ų-ha-jee=že
that_way <1E.U>be_young=INTS <1E.A>do/be-1E.A-POS.VERT=QUOT
wajsisikjk wa'ųqježe
wa<hi>sisik=njìk wa<ha>'ų-ha-jee=že
<1E.U>be_agile=DIM <1E.A>do/be-1E.A-POS.VERT=QUOT
yaakiregajq
hi<ha-kii>re=gajq
<1E.A-REFL>think=SEQ
‘Well, I thought, I was young and fast on foot.’ [MOV026]

The speaker in (10) expresses his surprise that the old man in this story ran much faster than he did. The transitive verb *hiré* ‘think something’ has two arguments, the thinker as A and the content of the thinking as U argument. The reflexivizer in this example cannot indicate coreference of A and U, but rather emphasizes that the narrated reality contradicts all expectations. A more idiomatic translation in English could perhaps be *I really thought for myself...* using the English reflexive pronoun as a self-intensifier within a prepositional phrase as a kind of adverbial to the main verb ‘thought’. A similar usage of the reflexivizer in Hoocák is shown in (11).

- (11) *yaa nijšge 'eejaxjì saacqxjì hotočocra hegū (hq)ke*
yaa nij=šge 'eejaxjì saacq=xjì hotočoc=ra hegū hake
yes me=also about_there five=INTS look_at<1E.A=DEF that_way NEG.IN
wažq nqakixgyni
wažq nąq<kii>xgū=njì
something <REFL>understand=NEG.FIN
‘Yeah, me too, even when I looked at the story about five times, I couldn’t understand a thing.’ [RRT073]

The transitive verb *nqaxgú* ‘to hear something’, ‘to understand something’ has the 1st person speaker as A argument and the content of what has not been understood (‘thing’) as U argument. The reflexivizer does not indicate coreference of A and U, but emphasizes the fact that despite all the efforts the speaker did not succeed in understanding.

4 Reflexive scenarios with body parts as target

As far as I can judge from the data I have at hand, there is no systematic constructional difference between reflexive scenarios expressed by introverted or extroverted verbs. Introverted verbs demand the same reflexive construction used for extroverted verbs.

However, one can find some constructional variation in reflexive scenarios that seem to be linked to different degrees of involvement of the patient argument as it is the case with parts of the body of the A argument. This constructional variation can be observed also with some introverted verbs. Reflexive scenarios with introverted verbs, i.e. verbs that designate body care (grooming) actions such as ‘to wash oneself’ or ‘to shave oneself’ (see Haspelmath 2023 [this volume]) occur sometimes with additional morphological material in Hoocák. In addition to the reflexivizer, the verb ‘to wash oneself’ may occur with the possessive reflexive marker. The possessive reflexive marker is a verbal marker that indicates that the A argument of a transitive verb possesses the U argument; compare the examples in (12a–12c).

- (12) a. *ružq* ‘to wash something’
- b. *ku-ružq* ‘to wash one’s own’
- c. *wažqtírera waakúružqqnq*
wažatíre=ra wa-ha-kú-ružq=ná
car=DEF OBJ.3PL-1E.A-POSS.REFL-wash=DECL
‘I wash my cars.’ [PM XI:8]

The verb *ružq* ‘to wash something’ requires the WASHER as A argument and what is WASHED as U argument. The reflexive possessive marker, which has three allomorphs (*kara-/kV-/k-* [POSS.REFL]), indicates that the referent of A possesses the referent of U; cf. (12b–12c). The clause (12c) without this marker would simply mean ‘I wash the cars’. The possessive reflexive does not increase the valency of the verb, but indicates an additional relation between A and U and is a good indicator for transitivity. Only transitive verbs may take it.

If *ružq* ‘to wash something’ is used to express the reflexive scenario ‘to wash oneself’, the possessive reflexive marker may appear in addition to the reflexivizer. See the elicited examples in (13–14).

- (13) *hakikúružqqnq*
ha-ki-kú-ružq=nq
1E.A-REFL-POSS.REFL-wash=DECL
'I wash myself.' [PM XI:8]
- (14) *hakikikuružqwi*
ha-kiki-ku-ružq-wi
1E.A-RECP-POSS.REFL-wash-PL
'We wash each other.' [PM XI:8]

Both constructions, the reflexive construction and the reciprocal construction, may take the possessive reflexive verbal marker. This constructional alternative, i.e. the combination of reflexivizer plus a possessive reflexive, can be found also with other semantic types of verbs. Compare the following two clauses from Hartmann's (2013) database.

- (15) *Wa'j šjuuc yaákikurukq.*
wa'j šjuuc <hi>ha-<ha-ki-ku>rukq
blanket be_warm <APPL.INST><1E.A-REFL-POSS.REFL>cover
'I covered myself with a warm blanket.' (Hartmann 2013: ex.8)
- (16) *Wa'j šjuuc yaa'yanqga haákituka.*
wa'j šjuuc hi<ha>'q=anqga ha<ha-ki>tukq
blanket be_warm <1E.A>use=and <1E.A-REFL>cover\1E.A
'I covered myself with a warm blanket.' (lit. 'I use a warm blanket, and I covered myself') (Hartmann 2013: ex. 730)

In the first clause (15), the transitive verb ‘to cover something’ takes both verbal markers, the reflexivizer and the possessive reflexive marker, and in the second (16) only the reflexivizer. Both clauses are semantically almost equivalent; the difference may perhaps be found in the completeness of the covering, which is partial in the first and complete in the second clause. The combination of reflexivizer plus possessive reflexive may thus correlate with a partial reflexive scenario.

We also find partial reflexive scenarios involving body parts that are expressed only with the possessive reflexive marker and no reflexivizer. For instance, in order to express ‘to shave (oneself)’ in Hoocák, one has to use the transitive verb

gik’o ‘to scrape off something’. In order to get the ‘shave’ meaning one has to modify the verb; see the following examples.

- (17) *’iih̡ıra* *gigik’o*
 ’ii-h̡ı=ra ∅-Ø-gi-gik’o
 mouth-hair=DEF 3SG.U-3SG.A-APPL.BEN-scrape_off
 ‘He₁ shaves him₂.’ (lit. ‘He₁ shaves the beard for him₂.’) [PM XI:9]
- (18) *’iih̡ırq* *karaik’o*
 ’ii-h̡ı=rq ∅-Ø-kara-gik’o
 mouth-hair=DEF 3SG.U-3SG.A-POSS.REFL-scrape_off
 ‘He₁ shaved himself₁.’ (lit. ‘He₁ shaves his₁, the mouth hair.’) [PM XI:9]

In (17), the verb *gik’o* ‘to scrape off something’ is derived by means of a benefactive applicative *gi-* [APPL.BEN] that opens a benefactive U argument. Without it, the translation would simply be ‘he₁ scrapes it (beard) off’. Note that the clause in (17) is not a reflexive construction and the two 3rd person arguments have different referents. The ‘*iih̡ı* ‘beard’ remains the patient U argument of the verb *gik’o* ‘to scrape off something’.

On the other hand, (18) is a reflexive construction, but without the reflexivizer *kii-*. Instead, the possessive reflexive marker is used. The reflexive scenario here is partial, because the U argument of *gik’o* ‘scrape off something’, the ‘mouth hair’ is a body-part of the A argument. The construction literally says that ‘A shaves his mouth hair’ rendered in English as ‘A shaves himself’. There are further examples that suggest that the degree of affectedness of the patient U in a partial reflexive scenario triggers the choice of different constructions. Compare, for example, the two clauses in (19) from our text corpus.

- (19) WL: *kirucecere ’anqaga nqqjurašge wakurucgisires’*
 BO: *hqhq*

a. WL:

kii-ru<ce>ce-ire *’anqaga nqqju=ra=šge*
 REFL<RDP>pull_off_a_piece-SBJ.3PL and hair=DEF=also
 wa-ku-rucgis-ire-s’
 OBJ.3PL-POSS.REFL-cut_with_scissors-SBJ.3PL-ITER
 ‘They cut themselves and they also cut their hair.’

b. BO:

hqhq
 yes
 ‘yes’ [RRT068]

In the first clause, the transitive verb *rucé* ‘pull off a piece (of soft substance)’, which is reduplicated *rucecé* ‘pull off many pieces’, takes the reflexivizer *kii-*. This construction is translated by our speakers as ‘they cut themselves’ implying that the action affects the referents of the A argument completely. The second clause describes a second reflexive scenario with the same referents as A, but in this case the action affects the actors only partially; *rucgis* is like *rucece* a transitive verb of cutting; see also the examples (4), (8), and (9) with the related verb *mqacgis* ‘to cut something (with a cutting instrument)’.

Even less affected is the patient U argument in the reflexive scenarios in the following two examples, (20–21). The transitive verb *horak* ‘to tell something’ is used to express the reflexive scenario ‘to talk about oneself’. In both cases, reflexivity is marked solely by the possessive reflexive marker.

- (20) *Hixqunyigregi...* *hižq hokarakre...* *hqhqo heesge*
 h̥i-xquny=n̥ik=regi hižq ho<ka>rak=re hahq'o heesge
 1E.U-be_small=DIM=SIM/LOC one <POSS.REFL>tell=IMP yes that's.why
 haakje.
 haa-kje
 make/CAUS.1E.A-FUT
 ‘When I was little... tell something about yourself!... yes, guess I'll do
 that.’ [HOR008]
- (21) *'Éegi hokarakšgúni* *žeesge hirairen.*
 'eegi ho<ka>rak=šgúni žeesgé hiré-ire=n
 then <POSS.REFL>tell(SBJ.3SG)=DUB thus think_through-SBJ.3PL=DECL
 ‘Then she told about herself, that's what they thought.’ [OH1.2_024]

There are also examples in the Hoocák corpus with *horak* ‘to tell something’ in which the combination of reflexive marker plus possessive reflexive appear; similarly for verbs of thinking.

The examples discussed so far suggest that the partiality of the reflexive scenarios correlates with the type of reflexive construction. However, this is only a very loose tendency. We find also clear examples in the corpus where the reflexive scenario is partial, but it is still the canonical reflexive construction that is used. Compare the utterance in (22).

- (22) *Hegü 'eeja hamıqnqkšqnq jaagü hegü higixgu nq'ıkje wagı'uňq jaagu*
 paara hegü nqqsura hąqke nij howacip rokiguńige.

heg̣u 'eeja haṃi<ha>nqk=šqnq jaagu heg̣u ḥi-gixgu
 that_way there <1E.A>sit.on(OBJ.3SG)=only what that_way 1E.U-buck_off
 nqq'i-kje wa<gi>'u=ra jaagu paa=ra
 try(SBJ.3SG)-FUT <APPL.BEN>do/be(SBJ.3SG)=DEF what nose=DEF
 heg̣u nqqsu=ra ḥaqke nij̣ ho-wacip
 that_way head=DEF NEG.IN water APPL.INESS-dump
 roo<**kii**>gu-ni=ge
 <REFL>want(SBJ.3SG)-NEG.FIN=CAUSAL

'Then I sat on her, and she was going to try to buck me off, but she didn't want to put her nose or head in the water.' (lit. '..., but she did not want to put herself in the water with regard to the nose and the head.')[HOR086]

In (22), the actor is the 'horse', which is introduced in previous clauses of this text. The reflexive construction is used to express the situation that the horse did not want to put parts of its body ('nose and head') under the water. This clause has to be read literally: 'she didn't want to put herself under the water, the nose (and) the head'. The reflexive scenario is thus partial, but the canonical reflexivizer is used. From the perspective of the English translation, one would expect the possessive reflexive to mark the possession of the body parts ('nose'/ 'head').

5 Coreference of the subject with various semantic roles

5.1 Possessor

As has already been illustrated with a few examples (see 1, 12, 18, and 19 above), there is a possessive reflexive marker *kara-/kv/k-* [POSS.REFL] that indicates a possessive or other close relationship between the A argument and the U argument of the transitive verb. A canonical example from the text corpus would be (23).

(23) BO:

heg̣u mijkeeja mijnäqkanäqkšqnq wiižukra
 heg̣u mijk='eeja mijnäk-a=näk=šanä wiižuk=ra
 that_way lie_down=there sit(SBJ.3SG)-0=POS.NTL=DECL gun=DEF
 kurusgenäqkšqnq
 Ø-Ø-ku-rusge=näk=šanä
 OBJ.3SG-SBJ.3SG-POSS.REFL-clean.up=POS.NTL=DECL
 'He was sitting on his cot, he was cleaning his rifle.' [BF1006]

The transitive verb *rusgé* ‘to clean something’ has a [3sg] A argument and a [3sg] U argument; both are marked zero. The A argument ‘he’ is the topic of this stretch of discourse, the U argument indexes the NP ‘the rifle’, which is part of the clause. The [POSS.REFL] marker indicates the possessive relation between A and U. If the possessor of the U argument is not coreferent with the A argument, another construction has to be used. In Hoocak, usually the benefactive applicative *gi-* [APPL.BEN] is used. This form translates in English as ‘for someone’, but, in addition, the benefactive applicative systematically has a possessive meaning. Compare (24).

- (24) *'iihjra gigik'o*
 'ii-hj=ra Ø-Ø-gi-gik'o
 mouth-hair=DEF 3SG.U-3SG.A-APPL.BEN-scrape_off
 'He₁ shaves him₂.’ (lit. ‘He₁ shaves the beard for him₂.’, or ‘He₁ shaves his₂ beard.’) [PM XI:9]

The transitive verb *gik'o* ‘to scrape something off’ receives a second U argument, which is semantically a benefactive or a possessor. The actor shaves the beard for someone else, which always implies that this someone else is or may be the possessor of the beard. The beneficiary of the shaving is never coreferent with the actor (A argument), and it is this benefactive/possessor U argument that is in most cases pronominally marked on the verb. The interpretation of the beneficiary as possessor is always available with intransitive inactive verbs, as well as with transitive verbs, and does not depend on the patient U argument, i.e. does not presuppose that the patient U argument is a body part (cf. Helmbrecht 2003, 2021). This is demonstrated in (25).

- (25) a. *hi'é* ‘to find something’
 b. *hi-gi-'é* ‘to find something for someone’
 c. *wažqtírera hijgi'eenq*
 wažqtíre=ra hi-<-hj-Ø->gi-'e=nä
 car-DEF <3SG.U_{PAT}-1E.U_{BEN}-3SG.A-3>APPL.BEN-find=DECL
 ‘He found the car for me.’/‘He found my car.’ (Helmbrecht 2003: 29)

Here, the patient U argument (‘the car’) is a 3rd person and thus zero marked. If the patient U argument were plural, the [OBJ.3PL] marker *wa-* would have been used. The beneficiary is licensed by the *gi-* applicative marker, and is likewise marked by a pronominal affix of undergoer paradigm. This beneficiary may always be interpreted as the possessor of the patient U argument (‘the car’), no matter if the patient U argument is a body part or not.

5.2 Locational participants

The two personal pronouns in Hoocák mentioned §2 are used only in certain focus constructions. They never fill argument positions of verbs or prepositions. In addition, Hoocák has no real adpositions, thus, construction like *She₁ saw a snake **besides her**₁* in English, where the pronominal complement of the preposition ‘besides’ is coreferent with the subject of the clause do not exist. However, locative U arguments exist, in particular if they are added to the argument frame of the verb by means of a locative applicative. One of these applicative markers is *ha-* [APPL.SUPESS], which can be translated as ‘on something’ ‘over something’ and the like. Together with the reflexivizer it is possible to mark coreference between the locative U argument and the A argument, as seen in (26).

- (26) *Kutei, nij̄ haakipaxi!*
 kutei nij̄ ha-ha-kii-paaxu
 INTJ(male) water APPL.SUPESS-1E.A-REFL-pour\1E.A
 ‘Oh, I poured water over myself.’ (Hartmann 2013: ex. 31)

There is a second locative applicative *ho-* [APPL.INESS] that is usually translated as ‘in something’, ‘into something’. With the reflexivizer and the locative inessive applicative, partial coreference is marked with the A argument; compare (27).

- (27) *Wanqq, nqqcawara nij̄ waakipaxu*
 wanqa nąqcawa=ra nij̄ ho-ha-kii-paaxu
 INTJ(female) ear=DEF water APPL.INESS-1E.A-REFL-pour\1E.A
 ‘I poured water into my ear.’ (Hartmann 2013: ex. 32)

Both examples have a non-reflexive meaning if the reflexivizer is dropped.

5.3 Benefactive/recipient

In addition to the above-mentioned locational applicatives, Hoocák has a benefactive applicative *gi-* [APPL.BEN] that introduces a beneficiary or recipient U argument into the argument frame of the verb. One could expect that this applicative marker may co-occur with the reflexivizer in the same manner as the locative applicatives co-occur with the reflexivizer, thus indicating coreference of the A argument with the benefactive/recipient U argument. Interestingly, this is not possible. I did not find a single instance of this combination in the entire Hoocák corpus (of more than 100 texts) and such a combination does not occur

on Hartmann's (2013) database of examples either. However, there are many instances in the corpus where the reflexivizer *kii-* alone has a beneficiary reading. See the following two examples.

- (28) “Žee mąqşų rakišuruxurukikjane,” *hijge.*
žee mąqşų ra-kii-šu-ruxuruk-i-kjane hi-<hi>ge
that feather 2.A-REFL-2.A-accomplish-0-FUT <1E.A>say.to(SBJ.3SG)
“You'll earn yourself a feather,” he said to me.’ [BOF061]
- (29) *Heesge ha'ų woorák te'e hegų hakurukézixji*
heesge ha-'ų woorak te'e hegų ha-kurukezi=xji
that's_why 1E.A-do/make story this that_way 1E.A-hold_highly=INTS
yaakíre.
hi-<ha-kii->re
<1E.A-REFL>think
‘That's why I thought I would bring out this story.’ (lit. ‘That's why I did it, I bring this story, I thought it for myself.’) [WIL134]

In both cases, the *kii-* [REFL] marker produces a kind of autobenefactive meaning. The U argument in both utterances is not identical with the A argument, but a kind of third participant is introduced that is the beneficiary of the action. In (28), it is the addressee of the direct speech of the grandfather of the speaker; in (29), it is the speaker himself, but he is not the patient U of the verb *hiré* ‘to think something’. Note that the double marking of the 2nd person A in (28) has nothing to do with reflexivity and is just a peculiarity of the morphology of the Hoocák verb.

6 Coreference between non-subject arguments

Hoocák does not have adpositional phrases (as clausal adjuncts) containing free personal pronouns or reflexive pronouns. Thus, constructions like *He spoke with John₁ about himself₁*, or *She told us₁ about ourselves₁* do not exist. The only way to express these states of affairs in Hoocák is to split these clauses in two such that the verbal predicate is repeated: *He spoke with/to John, and he spoke about him*.

7 Contrast between object and nominal adpossessor

Hoocák has no possessive pronouns. Instead, Hoocák has two kinds of external possessor marking, one with the possessive reflexive marker, and one with the

benefactive applicative. The possessive reflexive is used when the referent of A is, at the same time, the possessor of U (see 23 above). The benefactive applicative is used if the possessor of U is someone else (see 24–25 above). Another construction that allows expressing that the possessor of U is different than A is the NP-internal possessive construction with *hani*. Contrast the two following examples, (30a–30b).

- (30) a. *nijikják waakáragigusšqanq*
nijikják wa-ha-kára-gigus=šqanq
 child OBJ.3PL-1EA-POSS.REFL-teach-DECL
 ‘I₁ taught my₁ children.’

b. *nijikják waaninq* *waagígusšqanq*
nijikják wa-ha-Ø-nj’=ra *wa-ha-gigus=šqanq*
 child OBJ.3PL-OWN-SBJ.3SG-OWN=DEF OBJ.3PL-1E.A-teach=DECL
 ‘I₁ teach his₂ children.’ [DL XXIII:3]

The first one (30a) employs the possessive reflexive indicating that A is the possessor of U. The second one (30b) is used because the possessor of U is not A, but someone else. The construction is a kind of NP-internal possessive construction with a fully inflected transitive verb *hani* ‘to own something’ that is nominalized with the definite article. The NP can be translated literally as ‘child(ren)₁ (that) he owns them₁’.

8 Contrast between exact and inclusive coreference

Exact coreference between a 3rd person A and a coreferent 3rd person U is expressed with the reflexivizer *kii-* as in (2a) above. On the other hand, there is no easy and direct way to express inclusive coreference of the type *She₁ sees herself and the others_{1+x}*. The reason is, again, that Hoocak has no free personal pronouns or free reflexive pronouns that can enter into a syntactic coordination with ‘pro and the others’.

9 Long distance coreference

Reflexive marking (reflexivizer, reflexive possessive) is restricted to the clausal domain. There is no special construction in Hoocák indicating coreference of, for instance, subject arguments across clause boundaries, as can be found in

complement clauses of the type *She₁ thought that she₁ had enough money*. However, Hoocák allows the suspension of person indexing of the S/A arguments in the complement clause if this argument is coreferent with one of the arguments S/A/U of the matrix clause; see for instance (31) below.

- (31) *woorák te'é, hiperés nqqnígi'igé, 'eesgé*
 [woorák te'é hiperés nq-<njj-gi>'i=ge] ['eesgé]
 [story this know <1&2-APPL.BEN>want=CAUSAL] [thus
wáa'ūnq.
 wa<ha>'ū=na]
 <1E.A>be/do=DECL]
 'Because I wanted you to know this story, I did this.' [CHT064b]

The embedded transitive verb *hiperes* 'know' is not marked for the A argument which should be a 2nd person A argument that is at the same time the U argument of the matrix verb *nqq'i* 'to attempt something, to want something'. The verb *hiperes* 'to know something' of the complement clause is still a finite verb; it still inflects for the U argument (i.e. a zero affix here). This is thus a construction that signals coreference, but since it has no special form, it is not a reflexive construction.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

0	epenthetic vowel	CAUSAL	causal
APPL.INESS	inessive applicative	COLL	collective marker
	prefix	CONT	continuative
APPL.INST	instrumental	CTV	complement taking verb
	applicative	DIM	diminutive
APPL.SUPESS	superessive applicative	DUB	dubitative
	prefix	EMPH	emphatic
ASSUMP	assumptive	E	exclusive

FREQ	frequentative	POS.NTL	be (sitting/neutral position)
HAB	habitual	POS.VERT	be (standing/vertical position)
HYP	hypothetical	POT	potential
IMP.POST	delayed imperative	PROP	proper name marker
INC	inclusive	R	recipient
INFER	inferential	RDP	reduplication
INTJ	interjection	S _A	intransitive (actor) subject
INTS	intensifier	SEQ	sequential
ITER	iterative	SIM	simultaneous
NEG.FIN	final negator	SIM/LOC	simultaneity/locative
NEG.IN	initial negator	S _U	intransitive (undergoer) subject
OPT	optative	T	theme
ORD	ordinal numbers	U	undergoer patient
POS.HOR	be (lying/horizontal position)		

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Chapter 26

Reflexive prefixes in Oneida

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Oneida expresses coreference (or coindexing) by means of two verbal prefixes: the reflexive and the semi-reflexive. Coindexing is strictly a matter of morphology; there are no reflexive nominals, and the verbal prefixes are not grammatical voice morphemes. Both prefixes have other functions as well; for example the semi-reflexive derives anticausative verbs and verbs of nontranslational motion, and the reflexive can express reciprocity.

1 Introduction

Oneida (Northern Iroquoian), a polysynthetic language of North America, expresses coreference (coindexing) within a clause morphologically by means of two prefixes to the verb stem: the *reflexive* prefix *-atət-/atətə-* and the formally related *semi-reflexive* prefix *-at-/ate-/atə-/an-/al-/a-*.¹ There are no reflexive nominals in Oneida. Verb forms with the reflexive and semi-reflexive prefixes are given in (1) and (2). The pronominal inflections in (1a) and (2a) mark a relation between two distinct animate arguments: first person exclusive plural acting on third person masculine singular in (1a), and first person singular acting on third person masculine singular in (2a). The pronominal inflections in (1b) and (2b) mark a single animate argument. The verb form in (1b), with the reflexive prefix, is inflected with the pronominal prefix that marks a first person exclusive plural

¹The term “coindexing” is used here rather than “coreference”, following the cogent critique of the term “coreference” in the context of (reflexive) pronouns in Bach & Partee (1980) and subsequent work.



argument, and the verb form in (2b), with the semi-reflexive prefix, is inflected with the pronominal prefix that marks a first person singular argument.²

(1) The reflexive prefix

- a. *wa?shakwaste-líste?*
wa?-shakwa-stelist-e?
FACT-1EX.PL>3M.SG-laugh.at-PNC
'we laughed at him' (Michelson & Doxtator 2002: 670)
- b. *wa?akwatateste-líste?*
wa?-yakw-atate-stelist-e?
FACT-1EX.PL.A-REFL-laugh.at-PNC
'we laughed at ourselves' (Michelson & Doxtator 2002: 135)

(2) The semi-reflexive prefix

- a. *wahitsi?nyuhklo-kéwe?*
wa-hi-tsi?nyuhkl-okew-e?
FACT-1SG>3M.SG-snot-wipe-PNC
'I wiped his nose' (Michelson & Doxtator 2002: 737)
- b. *wa?kattsi?nyuhko-kéwe?*
wa?-k-at-tsi?nyuhkl-okew-e?
FACT-1SG.A-SEMIREFL-snot-wipe-PNC
'I wiped my nose' (Michelson & Doxtator 2002: 278)

Reflexive meaning in Oneida is expressed exclusively in the verbal morphology. However the reflexive and semi-reflexive are not grammatical voice morphemes; although they do express meanings that in other languages are associated with reflexive or middle voice, there is no evidence for an inflectional voice category in Oneida. In addition it should be noted that the functions of the reflexive and semi-reflexive prefixes are not restricted to coindexing. This is especially

²In the Oneida orthography the vowel ⟨u⟩ is a high-mid back mildly rounded nasalized vowel and ⟨ʌ⟩ is a low-mid central nasalized vowel. A raised period indicates vowel length. Underlining indicates devoicing, a common phenomenon at the end of an utterance. Single inflected words are from Michelson & Doxtator (2002); in a few cases a form with a different pronominal prefix is given for ease of comparison. Longer utterances are excerpted from the recorded texts published in Michelson et al. (2016); excerpts are followed by the name of the speaker, title of the recording, and page and sentence number from Michelson et al. (2016). Note that in the excerpts not every particle is glossed; a sequence of particles may be translated into English with a single word.

so for the semi-reflexive, where the outcome of affixation often has an unpredictable semantic component. Oneida does have independent personal pronouns, used primarily for emphasis and contrast, but there is no reflexive pronoun.

The next section of the paper provides a very brief overview of Oneida morphology that is relevant for understanding the interaction of the reflexive and semi-reflexive with verbal pronominal marking. §3 describes the functions of the reflexive, and §4 is about the semi-reflexive. §4 also compares the distribution of the various forms of the two prefixes. §5 describes how participant roles interact with coindexing, including alternative structures to coindexing for certain roles. The last section ends the paper with some final observations.

2 Background

Oneida is a Northern Iroquoian language spoken by fewer than forty speakers who learned Oneida as their first language. Historically the Oneida nation was located in upstate New York, just east of Syracuse, but in the 1800s groups moved to southwestern Ontario and to northeastern Wisconsin near Green Bay. While today the Oneida, or Onyoyote'a-ká· (People of the Standing Stone), reside in all three locations, Oneida is spoken by first-language speakers only at the Oneida Nation of the Thames territory in Ontario (Figure 1).

Oneida is a polysynthetic language and like other Northern Iroquoian languages, it is remarkable for its complex verbal morphology, including around



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Figure 1: Locations where Oneida is spoken

sixty or so bound pronominal prefixes, an intricate distribution of prepronominial prefixes that include meanings having to do with negation, locations, and quantity (to mention a few), and robust noun incorporation. Despite the proximity to the dominant English-speaking towns, Oneida has relatively few borrowings, instead using mostly conventionalized inflected verb forms as labels for new concepts. There are over 150 uninflected particles with a wide range of meanings; they can, for example, express locations, negation, quantitative and modal concepts, and link clauses in various ways.

Traditionally, Northern Iroquoian is described as having three morphological parts of speech – verbs, nouns and uninflected particles, with kinship terms more recently recognized as a fourth (see Koenig & Michelson 2010). Verbs, nouns and kinship terms are obligatorily inflected with pronominal prefixes. The semantic categories distinguished by the prefixes are person (first, second, third, plus inclusive versus exclusive), number (singular, dual, plural), and gender (masculine, feminine-zoic, feminine). The feminine-zoic singular refers to some female persons, animals, and some inanimates in motion (Abbott 1984; Michelson 2015). The feminine occurs only in the singular; all nonsingular female persons are referred to with feminine-zoic prefixes.³ An indefinite (or unspecified) category is syncretic throughout the system with the feminine singular, and “feminine-indefinite” is the traditional label for the feminine singular plus indefinite categories.

There are three paradigmatic classes of pronominals, and their distribution is relevant for understanding the morphology of reflexive verbs as compared with corresponding non-reflexive verbs. First, there is a class of portmanteau-like prefixes that occur with verbs that have two semantic arguments that are both animate (which includes most kinship terms). For example, the verb form in (3) is inflected with the prefix that references a first person singular proto-agent and a third person masculine singular proto-patient (the terms proto-agent and proto-patient are adopted from (Dowty 1991) for semantic roles not confined to canonical agent and patient). The verb forms in (1a) and (2a) in the introduction also have prefixes that reference two animate arguments. The other two classes of pronominals, Agent and Patient, occur with verbs that have only one animate semantic argument. Verbs with Agent pronominals are exemplified in (4) and (5). The verb *-ye-* ‘wake up’ in (4) has one animate semantic argument, third person masculine singular, and it is inflected with the Agent prefix *ha-*. The verb

³The label “neuter” sometimes is used in place of feminine-zoic for some of the languages related to Oneida, such as Cayuga and Seneca which no longer distinguish reference to single female “zoic” persons from inanimates.

-ket- ‘scrape, grate’ in (5) has two semantic arguments but only one animate argument, third person masculine singular; the Agent prefix *ha-* references this animate argument, and the inanimate argument is not referenced. When a verb has no animate arguments, the verb is inflected with the feminine-zoic singular prefix, since every verb must have a pronominal prefix. Often, the selection of Agent versus Patient paradigm may be evident from the meaning of the verb, but in many cases the semantic motivation has become obscured and the selection of Agent/Patient prefixes is considered by all Iroquoian scholars to be lexically determined by the verb. (See Koenig & Michelson 2015 for a detailed discussion about the realization of arguments in Oneida and the distribution of pronominal prefixes, including arguments for the feminine-zoic singular prefix as the default prefix.)

- (3) *wahihle-wáhte?*
wa-hi-hlewaht-e?
 FACT-1SG>3M.SG-punish-PNC
 ‘I punished him’ (Michelson & Doxtator 2002: 375)
- (4) Monadic verb with one animate argument: Agent prefix
waha-yé.
wa-ha-ye-?
 FACT-3M.SG.A-wake.up-PNC
 ‘he woke up’ (Michelson & Doxtator 2002: 806)
- (5) Dyadic verb with one animate argument: Agent prefix
waha-kéte?
wa-ha-ket-e?
 FACT-3M.SG.A-scrape,grate-PNC
 ‘he scraped it, he grated it’ (Michelson & Doxtator 2002: 470)

Reflexive and semi-reflexive prefixes occur between the pronominal prefix and the verb root. The verbs *-nuhlyak?* ‘hurt’ in (6) and *-ahseht-* ‘hide’ in (8) have two distinct animate arguments and bear prefixes referencing both arguments – the same arguments as the verb form in (3). The form in (7), with the reflexive *-atat-*, is inflected with the first person singular Agent prefix referencing the single distinct animate argument. Likewise, the verb forms in (9–10), the latter with the semi-reflexive, have only one animate argument and both are inflected with an Agent prefix.⁴

⁴Verbs with the reflexive prefix always occur with the Agent paradigm of pronominal prefixes. Verbs with the semi-reflexive can select the Patient paradigm. Some verbs, such as *-ahseht-* ‘hide’ in (8–10), require the incorporated root *-ya?t-* ‘body’ when the affected argument is animate, as is the case in (8); see (Michelson & Doxtator 2002).

- (6) Verb with two distinct animate arguments
wahinú·yahke?
wa-hi-nuhlyā?k-e?
FACT-1SG>3M.SG-hurt-PNC
'I hurt him' (Michelson & Doxtator 2002: 602)
- (7) Reflexive verb with one distinct animate argument: Agent prefix
wahatatnú·yahke?
wa-k-atat-nuhlyā?k-e?
FACT-1SG.A-REFL-hurt-PNC
'I hurt myself' (Michelson & Doxtator 2002: 143)
- (8) Verb with two distinct animate arguments
wahiya?táhsehte?
wa-hi-ya?t-ahseht-e?
FACT-1SG>3M.SG-body-hide-PNC
'I hid him' (Michelson & Doxtator 2002: 69)
- (9) Verb with one animate argument: Agent prefix
wa?káhsehte?
wa?-k-ahseht-e?
FACT-1SG.A-hide-PNC
'I hid it' (Michelson & Doxtator 2002: 69)
- (10) Semi-reflexive verb with one distinct animate argument: Agent prefix
wa?katáhsehte?
wa?-k-at-ahseht-e?
FACT-1SG.A-SEMIREFL-hide-PNC
'I hid' (Michelson & Doxtator 2002: 129)

Oneida does have free-standing pronouns, but they are used only for emphasis and contrast. First and second person pronouns are uninflected particles, i.e. have a constant form: *i*- for first person, and *isé*- for second person. Third person forms are based on a stem *-ulha?*, inflected with the appropriate pronominal prefixes (from the Patient paradigm). This stem is often glossed 'self' in work on Iroquoian, but it is an intensifier and its function does not include coindexing. The excerpts in (11–12) are examples of how it is used.

- (11) Intensifier *-ulha?*

Kwáh akwekú lonulhá· lotiyáthu.
Kwáh akwekú lon-ulha? loti-yátho-u
 quite all 3M.PL.P-self 3M.PL.P-plant-STV

'They grew everything themselves.' (Verland Cornelius, *A Lifetime of Memories*, 320 (88))

- (12) *nΛ akaulhá· sÁ oskanáha waʔenhotu·kó·,*

nΛ aka-ulha? sÁ oskanáha wa?-ye-nhotukw-?
 then 3FI.P-self also quietly FACT-3FI.A-open.a.door-PNC
 'then she herself also quietly opened the door' (Norma Kennedy, *The Girl With the Bandaged Fingers*, 82 (31))

The next two sections give more detail about the distribution and functions of the reflexive and semi-reflexive prefixes.

3 Reflexive prefix

The reflexive prefix *-atat-/atate-* functions to identify an instigator of an event as identical with the affected participant, i.e. coindexes a proto-agent and proto-patient participant. Some verbs that are attested with the reflexive are listed in (13). The distribution of *-atat-* and *-atate-* is phonological: *-atate-* occurs when the prefixation of *-atat-* to the verb stem would result in a non-occurring consonant cluster.

- (13) Verbs with the reflexive prefix⁵

- a. *-aweʔest-* 'prick, pierce, sting', *-atataweʔest-* 'prick oneself'
- b. *-hlen-* 'cut into, incise', *-atathlen-* 'cut oneself'
- c. *-hloli-* 'talk about someone', *-atathloli-* 'talk about oneself'
- d. *-itΛl-* 'pity someone', *-atatitΛl-* 'feel sorry for oneself'
- e. *-kaly-* 'bite someone', *-atatkaly-* 'bite oneself'
- f. *-kuʔtslihal-* 'weigh something', *-atakuʔtslihal-* 'weigh oneself'
- g. *-lyo-/liyo-* 'kill', *-atatlivo-* 'kill oneself'

⁵Some of these are internally complex; the composition of complex stems is given in Michelson & Doxtator (2002) as part of the entry for the stem. Also, stems in Oneida may require a particular prenominal prefix; for reasons of space, throughout this paper, stems are listed without these prefixes but again this information can be retrieved by consulting Michelson & Doxtator (2002).

- h. *-nutu-* ‘put something into someone’s mouth’, *-atatenutu-* ‘feed oneself’
 - i. *-shnye-* ‘look after someone, nurture’, *-ataleshnye-* ‘look after oneself’
 - j. *-stelist-* ‘laugh at someone’, *-atastestelist-* ‘laugh at oneself’
 - k. *-wy₁nata?-* ‘get something ready’, *-atatewy₁nata?-* ‘get oneself ready’
 - l. *-ya?takenha-* ‘help someone out’, *-ataty₁a?takenha-* ‘help oneself’
 - m. *-?nikuhlol₁-* ‘entertain someone’, *-ata?₁nikuhlol₁-* ‘entertain, amuse oneself’
 - n. *-?nutanhak-* ‘blame someone’, *-ata?₁nutanhak-* ‘blame oneself’
 - o. *-?skuthu-* ‘burn someone’, *-ata?₁skuthu-* ‘burn oneself’

An additional use of the reflexive prefix is with kinship terms. The reflexive can occur with a few kinship terms to indicate a dyadic relation; an example is *-atatyʌha* ‘parent and child’ in the excerpt in (14a). The effect of the reflexive with kinship terms is to express a reciprocal relation. Otherwise reciprocals normally require the dualic prenominal prefix, as discussed later on in this section. Without the reflexive, the kinship term refers to one of the members only, as in (14b).

(14) The reflexive with kinship terms

The reflexive can encode some additional meaning. For example, with certain one-place predicates that describe a physical attribute or kind of personality, the reflexive adds a component of meaning that may be rendered into English as ‘think oneself so’ or ‘act so’, as in (15a). With some verbs the reflexive adds a component that suggests effort, as with the verb ‘apply oneself’ in (15b). Other verbs that cannot be derived compositionally from the meaning of the non-reflexive verb are ‘hire oneself out’ in (15c) and ‘turn oneself into (another being)’ in (15d).

(15) Reflexive verbs with some additional meaning

- a. *Shayá·tat ka?iká kΛ? nithoyáha, yah kwí· te?wé·ni*
shayá·tat ka?iká kΛ? nithoyáha yah kwí· te?wé·ni
he is one person this young guy not really it's incredible
nihatatnikáhtele?
ni-h-atat-nikáhtle-?
PART-3M.SG.A-REFL-be.handsome-STV
*‘This one young fellow, he thought he was so handsome.’ (Georgina Nicholas, *The Flirt*, 32 (4))*
- b. *tsi? a·hutataskénha?, a·hotiyo·tá·,*
tsi? aa-hu-atat-askenha-? aa-hot-i-yotΛ-?
COMP OPT-3M.PL.A-REFL-fight.over-PNC OPT-3M.PL.P-work-PNC
ta·huthwatsiláshnye?,
t-aa-hu-at-hwatsil-a-shnye-?
DLC-OPT-3M.PL.A-SEMIREFL-family-JOIN-look.after-STV
*‘(they told them) that they should apply themselves, they should work, they should look after their families,’ (Pearl Cornelius, *Family and Friends*, 180 (13))*
- c. *nΛ ki? ok ale? wí· wahutatéhane?, kátsha? ok nú·*
nΛ ki? ok ale? wí· wa-hu-atate-nha?-ne? kátsha? ok nú·
then again FACT-3M.PL.A-REFL-hire-PNC somewhere
tahuwatínhane?,
t-a-huwati-nha?-ne?
CISLOC-FACT-3>3M.PL-hire-PNC
*‘and then again they would hire themselves out, someone would hire them somewhere,’ (Mercy Doxtator, *All About Tobacco*, 246 (4))*
- d. *Aulhá· né· thiká kóskos yotatunihátyehse?*
aulhá· né· thiká kóskos yo-atat-uni-hatye-hse?
herself ASSERTION that pig 3FZ.SG.P-REFL-make-PROG-HAB
*‘And it was her that would turn herself into a pig’ (Verland Cornelius, *A Witch Story*, unpublished (11))*

Finally, reciprocal meaning is expressed with the reflexive plus a prenominal prefix with diverse functions, the dualic (duplicative) prefix *te-*. (The basic meaning of the dualic/duplicative is usually described as involving ‘twoness’, but its functions are quite diverse; see, for example, Lounsbury 1953.) Just like reflexive verbs, verbs that have the reciprocal structure occur with the Agent paradigm of pronominal prefixes. This is shown in the excerpt in (16), which includes two instances of the verb *-naskw-* ‘steal (from)’. The last verb form in (16), without the reflexive, bears the prefix *hak-*, referencing two animate arguments, third person masculine singular and first person singular. The first verb form in (16) is a reciprocal with both reflexive and dualic prefixes; it is inflected with the first person exclusive dual Agent prefix *yaky-*.

- (16) Reciprocal verb with the reflexive and dualic prefixes
- | | |
|---|---------------------------------------|
| <i>teyakyatnáskwas,...</i> | <i>ókhale? tho tehahyakwilotáti?</i> |
| <i>te-yaky-atat-naskw-as</i> | <i>ókhale? tho tehahyakwilotáti?</i> |
| DLC-1EXCL.PL.A-REFL-steal-HAB | and there he is coming on his tiptoes |
| <i>wahakkλhanasko?</i> | |
| <i>wa-hak-kλh-a-naskw-?</i> | |
| FACT-3M.SG>1SG-blanket-JOIN-steal-HAB | |
| ‘we would steal [the blanket] from each other,... he’d come tiptoeing and steal the blanket from me.’ (Pearl Cornelius, <i>Family and Friends</i> , 307 (93)) | |

Many verbs can express both reflexive and reciprocal meaning (for example *-atatyā?takenha-* ‘help oneself’ and *te- ... -atatyā?takenha-* ‘help each other’) but some verbs can express only reciprocal meaning (for example *-atatnaskw-* ‘steal from one another’, *-atatlā?nha-* ‘get to know one another, become acquainted’, and *-atatkahnle-* ‘look at one another’).⁶

4 Semi-reflexive prefix

The semi-reflexive prefix *-at-/ate-/atλ-/an-/al/-a-* occurs widely in Oneida (the different forms are discussed at the end of this section). The semi-reflexive has a number of functions including use with verbs of grooming, deriving anti-causative verbs, and deriving verbs that involve change of position and manner of self-propulsion. These are meanings that are expressed in some languages by the middle voice. But the semi-reflexive can also change the semantic role of one

⁶There is a reflexive verb ‘see oneself’, *-atatkλ-*, but it is based on a different verb, *-kλ-* ‘see’.

of the arguments of the verb, and often the result of affixing the semi-reflexive is at least partially unpredictable. These functions are discussed in turn below.

The semi-reflexive is found with most verbs of grooming and body care, including those whose meaning involves the whole body and those that target just a part of it. Many of these verbs have an incorporated noun that denotes the affected body part. The verb form in (17a) involves adornment of the whole body while the one in (17b) is directed just at teeth. Additional grooming verbs are listed in (18).

(17) Semi-reflexive with grooming verbs

- a. *yakotyaʔtahsluni*
yako-at-yaʔt-a-hsluni
3FL.P-SEMIREFL-body-JOIN-dress,prepare[STV]
'she is all dressed up' (Michelson & Doxtator 2002: 298)
- b. *yutnawilóhalehe?*
yu-at-nawil-ohale-he?
3FL.A-SEMIREFL-tooth-wash-HAB
'she is brushing her teeth' (Michelson & Doxtator 2002: 921)

(18) Grooming verbs

- a. *-atewyʌʔt-* 'fix, put away, take care of', *-atatewyʌʔt-* 'make oneself presentable'
- b. *-hsluni-* 'dress someone', *-atsluni-* 'get dressed'
- c. *-kustuʔlhyaʔk-* 'cut a beard, shave someone', *-atkustuʔlhyaʔk-* 'shave oneself'
- d. *-nathalho-* 'comb someone's hair', *-atnathalho-* 'comb one's (own) hair'
- e. *-wiskalho-* 'smear with white', *-atwiskalho-* 'put face powder on'

The semi-reflexive derives anticausatives; some derived anticausative verbs are listed in (19). The verbs in (20) represent a sizeable cohort of derived stems with both the semi-reflexive prefix and an overt causative suffix *-t-/ht-/ʔt-/st-*. However, with these stems, a canonical causative meaning cannot always be discerned, and furthermore the result of affixing the semi-reflexive can be unpredictable. In other words, while the verbs in (19) are relatively transparent anticausatives, the verbs in (20) are less so.

- (19) Semi-reflexive derives anticausative verbs
- hyoʔkt-* ‘dull something, make dull’, -*athyoʔkt-* ‘become dull’
 - kaʔtshyu-* ‘undo’, -*atkaʔtshyu-* ‘come undone’
 - khahsyu-* ‘separate, divide, share’, -*atekhahsyu-* ‘come apart, separate’
 - hwanhak-* ‘tie up’, -*athwanhak-* ‘get tied up’
 - lanyu-* ‘rub something’, -*atlanyu-* ‘rub against’
 - laʔnekalu-* ‘burst something’, -*atlaʔnekalu-* ‘burst’
 - laʔnatahsyu-* ‘peel something’, -*atlaʔnatahsyu-* ‘peel off’
 - tenihʌ-* ‘shake something’, -*attenihʌ-* ‘flap’
- (20) Anticausative verbs with a causative suffix and semi-reflexive prefix
- ahkatste-* ‘be tough, endure’, -*atahkatstat-* ‘toughen up, make oneself tough’
 - anowʌ-* ‘be a liar’, -*atanowʌht-* ‘doubt, not believe’
 - ksaʔtaksʌ-* ‘be a bad child’, -*ateksaʔtaksaʔt-* ‘misbehave’
 - lakal(ehl)-* ‘for a noise to sound’, -*atlakalehlast-* ‘make noise’
 - lhale-* ‘be ready, expecting’, -*atelhalat-* ‘get (oneself) ready’
 - shnole-* ‘be fast’, -*ateshnolat-* ‘go fast, do quickly’
 - shw-* ‘smell, get a whiff of’, -*ateshwaht-* ‘smell something’
 - ?niskw-* ‘be late’, -*atʌʔniskwaht-* ‘do late, slowly, behind schedule’

The semi-reflexive verbs in (21–22) describe a change in posture or orientation, or have to do with motion in a particular manner. The verbs in (22) are derived from stative verbs.

- (21) Semi-reflexive derives verbs with a change in orientation or manner of motion
- awʌhlat-* ‘put something over something’, -*atawʌhlat-* ‘spill over, go over’
 - awʌlye-* ‘stir something’, -*atawʌlye-* ‘wander, stroll’
 - kalhateny-* ‘turn something over’, -*atkalhateny-* ‘turn around’
 - kalhatho-* ‘turn or knock over, plow’, -*atkalhatho-* ‘turn or roll over’
 - ketskw-* ‘right something’, -*atketskw-* ‘right oneself, sit up’
 - kwiʔt-* ‘move something’, -*atkwiʔt-* ‘move over’
 - ukoht-* ‘penetrate, force through’, -*atukoht-* ‘pass by, continue on’
 - ?sle-/i?slə-* ‘drag something’, -*ate?sle-* ‘crawl’

(22) Semi-reflexive verbs derived from stative verbs

- a. *-haʔkwawelu-* ‘have one’s head back with throat exposed’,
-athaʔkwawelu- ‘put one’s head back’
- b. *-nʌtshotalho-* ‘have one’s arm hooked through something’,
-atnʌtshotalho- ‘hook one’s arm (through someone else’s)’
- c. *-utshot-* ‘be kneeling’, *-atutshot-* ‘kneel down’
- d. *-ʔnoyot-* ‘be stooped’, *-ateʔnoyot-* ‘stoop over (something)’

With a significant number of verbs, the semi-reflexive changes the participant role of one of the arguments of the verb in an unpredictable way, or it just derives a verb with a different and unpredictable meaning. Examples are listed in (23).

(23) The semi-reflexive derives a verb with unpredictable meaning

- a. *-ahlist-* ‘forbid someone’, *-atahlist-* ‘put a stop to’
- b. *-hloli-* ‘tell someone something’, *-athloli-* ‘talk about someone or something’
- c. *-hninu-* ‘buy’, *-atʌhninu-* ‘sell’
- d. *-itʌht-* ‘be poor’, *-anitʌht-* ‘plead’
- e. *-khuni-* ‘prepare food, cook’, *-atekhuni-* ‘eat a meal’
- f. *-kweny-* ‘beat at, best someone’, *-atkweny-* ‘win’
- g. *-liyo-/lyo-* ‘beat, kill’, *-atliyo-* ‘fight’
- h. *-niha-* ‘lend’, *-atʌhniha-* ‘borrow’
 - i. *-oʔkt-* ‘come to the end of, finish, end’, *-atoʔkt-* ‘run out of’
 - j. *-nyeht-* ‘send something with someone’, *-atʌnyeht-* ‘send someone something’
- k. *-olishʌ-* ‘be out of breath, pant’, *-atolishʌ-* ‘rest’
- l. *-tsyʌʔt-* ‘cure someone’, *-atetsyʌʔt-* ‘treat someone’
- m. *-nha?-* ‘hire someone, get someone to do something’, *-atʌnha?-* ‘hire labour’
- n. *-ʔtsha?-* ‘get beaten, stumped’, *-atʌʔtsha?-* ‘earn’

The semi-reflexive has been described by Lounsbury (1953: 74) for Oneida, Woodbury (2018: 237–243) for Onondaga, and Chafe (2015: 55–58) for Seneca. There is an additional function mentioned in these sources that is relevant here, which is to indicate ownership. An example with an English translation that suggests that an entity, in this case ‘shoes’, belongs to the proto-agent is (24). The

last verb form in (15b) above, ‘look after one’s family’, also suggests a kind of ownership.

(24) Semi-reflexive and ownership

wa?tkaláhtane?

wa?-t-k-al-ahta?-ne?

FACT-DLC-1SG.A-SEMIREFL-put.on.shoes-PNC

‘I put on my shoes’ (Michelson & Doxtator 2002: 97)

However, possession is not entailed. Often, pragmatically it makes sense to think of the object as belonging to the instigator, but (outside of body parts of course) the entity can belong to someone else, or to no one. The semi-reflexive verb just indicates some sort of physical or perceived proximity. In fact, for many verbs, it would be odd to think of the entity as being owned. The verb form in (25) was used in the context of the narrator’s grandmother making baskets, which she sold or traded for goods. The same verb (*-uni-* ‘make’) occurs in (26), with the affected entity expressed externally rather than by an incorporated noun. Here the narrator is talking about her grandmother making her own butter and cheese. In these contexts, it makes little sense to talk of belongings; rather the sense is making baskets herself for her own purpose; or butter and cheese herself, for her and the family’s use.

(25) *Né· s kwí· yakola?nhá·u a·yuta?ahslu·ní·*

né· s kwí· yakola?nhá·u aa-yu-at-a?ahsl-uni-?

ASSERTION she knows how OPT-3FI.A-SEMIREFL-basket-make-PNC

‘She really knew how to make baskets.’ (Georgina Nicholas, *An Oneida Childhood*, 207 (62))

(26) *né· s kwí· né· owistóhsli? wa?utu·ní·*

khále? cheese,

né· s kwí· né· owistóhsli? wa?yu-at-uni-?

khále? cheese

ASSERTION butter FACT-3FI.A-SEMIREFL-make-PNC and cheese

cottage cheese.

cottage cheese

cottage cheese

‘she made butter, and cheese, cottage cheese.’ (Verland Cornelius, *A Lifetime of Memories*, 318 (67))

This section ends with a brief description of the distribution of the different forms of the semi-reflexive, *-at-/ate-/atə-/an-/al-/a-*, and the overlap with the forms of the reflexive, *-atat-/ataṭe-*. As already mentioned, the reflexive is

-atate- when adding *-atat-* to the stem would result in a sequence of consonants that is not permitted in Oneida. Similarly, the semi-reflexive form *-ate-* occurs if otherwise a non-occurring cluster would result. If there were no other semi-reflexive realizations, the reflexive would simply constitute a sequence of two semi-reflexives. However, the semi-reflexive does have additional forms, and the distribution of the forms is only partly phonological: *-at_A-* (mainly before stems that begin in *n* or *hn*), *-al-* (before lexically-specified roots that begin in the vowel *a*), *-an-* (before lexically-specified roots that begin in the vowel *i*), and *-a-* (before a few lexically-specified roots beginning in *n* or *?n*). The same stem can occur predictably with the *-atat-* or *-atate-* reflexive but select a semi-reflexive form that is not *-at-* or *-ate-*. For example, the verb *-hninu-* ‘buy (from)’ occurs with the semi-reflexive *-at_A-* in *-at_Ahninu-* ‘sell’, listed in (23) above, but with the reflexive *-atat-* (see 27 below). Another example is *-nha?* ‘hire someone’, *-at_Anha?* ‘hire labour’ with the semi-reflexive *-at_A-* in (23), and *-atatenha?* ‘hire oneself out’ with the reflexive *-atate-* in (15c).

5 Semantic roles

This section is a discussion of pairs of participant roles other than canonical proto-agent and proto-patient that can be coindexed in Oneida, as well as some participant roles that require or allow a reflexive structure in some languages but do not involve the (semi-) reflexive prefixes in Oneida.

A relatively productive suffix in Oneida is the benefactive-applicative, and stems with this suffix can be prefixed with the reflexive to derive stems with arguments that are coindexed, as in the excerpt in (27). Other benefactive verbs are *-atatlihunyʌni-* ‘teach oneself’ (literally, make the matter for oneself) and *-atatyοʔtʌhse-* ‘work for oneself’. (There are several forms of the benefactive suffix, some phonologically unrelated; for example *-ʌni-* and *-hs(e)-*.)

- (27) Reflexive with the benefactive

<i>né· tsi? i·</i>	<i>akhwísta?</i>	<i>wá·katste?</i>
<i>né· tsi? i·</i>	<i>ak-hwist-a?</i>	<i>wa?-k-atst-e?</i>
because FIRST PERSON 1SG.POSS-money-NSF FACT-1SG.A-use-PNC		
<i>wa?katathninúnyuhse?</i>		<i>tsyo?k nahté·shu?,</i>
<i>wa?-k-atat-hninu-nyu-hs-e?</i>		<i>tsyo?k nahté·shu?</i>
FACT-1SG.A-REFL-buy-DISTR-BEN-PNC all kinds of things		
'because I used my money to buy all these things for myself' (Norma Kennedy, <i>My First Job in Tobacco</i> , 274 (66))		

Interestingly while verbs whose meaning includes a benefactive argument are quite productive with the reflexive, verbs whose meaning includes a recipient seem to be unattested. For example, in Oneida, one cannot give or send something to oneself; but one can give things to one another, as with the reciprocal of the verb *-awi-/ -u-* ‘give’ in (28a). For ‘talk to oneself’ a speaker provided the circumlocution in (28b). Here, a form of the emphatic pronoun *-ulha?* (see additional examples in 11–12) meaning ‘I am all alone’ is followed by a verb that asserts I am talking; indeed this is perhaps a more careful interpretation of what it means to say ‘talk to oneself’, namely, ‘there I am all alone, and *still* (nevertheless) I am talking’.

- (28) a. Reciprocal verb (but no corresponding reflexive)

Tho?ná ahsí-lu? ‘tsyoní-tu?’

tho?ná a-hs-ihlu-? ‘tsyoní-tu?’

and then FUT-2SG.A-say-PNC beaver

tetyatatnawi-lú.

te-ty-atat-nawil-u-?

DLC-1INCL.DU.A-REFL-tooth-give-PNC

‘And then you will say, “beaver let’s trade teeth!”’ (Mercy Doxtator, *Beaver, Let’s Trade Teeth!*, 197 (10))

- b. *Akulha?tsí-wa?* *tho wakéthale?*

ak-ulha?-tsí-wa? tho wake-thal-e?

1SG.POSS-self-intensely there 1SG.P-talk,converse-STV

‘I am all alone (and) still I am talking.’ (Spoken by Olive Elm, 12-17-2019)

There are no special reflexive forms used for possession. Alienably-possessed entities in Oneida can be inflected with possessive prefixes (related to the Patient series of verbal pronominal prefixes) that identify the person, number and gender of the possessor; inalienably-possessed entities take Agent prefixes (Koenig & Michelson 2019, 2020 are detailed discussions of possession in Oneida). The excerpts in (29a) and (29b) both have the alienably-possessed form *laohwista?* ‘his money’ with the third person masculine singular possessive prefix *lao-*. These excerpts come from a report about a man who regularly left his money with the owner of the local store. When the man died, his son asked the store owner for the old man’s money, but the store owner denied having the money. In (29a) the possessor is coindexed with the masculine singular argument of the verb *-atye-* ‘throw’, but in (29b) the possessor is disjoint from the masculine singular argument of *-hawe-* ‘hold, have’. (Out of context, without mention of an overt

possessor, the usual interpretation is that the possessor is coreferential with the coargument of the verb.)

(29) a. Possession

Tho s yakΛ? nū· yehótyehse?
tho s yakΛ? nū· ye-ho-atyehse?
 that's habitually reportedly where TRANSLOC-3M.SG.P-throw-HAB

laohwísta?, la·té· latewyá·tuhe?

lao-hwist-a? la·té· latewyá·tuhe?

3M.SG.POSS-money-NSF he said

'That's where he_i left his_i money, he_i said he_i was saving it.' (Olive Elm, *The Dreamer*, 170 (58))

b. *tsi? lonúhte? kΛ? láhawe?*

tsi lo-anuhte? kΛ? la-haw-e?

COMP 3M.SG.P-know-STV right there 3M.SG.A-hold,have-STV

laohwísta? ká,

lao-hwist-a? ká.

3M.SG.POSS-money-NSF y'know

'because he_i knew he_j was holding his_i money right there,' (Olive Elm, *The Dreamer*, 171 (64))

English-like constructions involving coreference with oblique arguments or coreference with a non-subject (patient) do not occur in Oneida. Equivalents of these English-like constructions are expressed differently in Oneida. The excerpt in (30) includes a typical locative structure. There are no adpositions in Oneida and the equivalent phrases require a particle specifying a location (*ohna?ká·shu?* 'along behind') and the orientation or movement of the located entity (in this case, someone – an unknown and frightening being – is coming along). The excerpt in (31) is given here as an example of a typical multi-clausal structure that is used where in English there is coindexing of a non-subject (e.g. 'they would talk to them about themselves'). Instead of a prepositional phrase ('about themselves') Oneida requires a clause; in this case 'what their life (or lifestyle) should be like'.

(30) Locative clause

Né-n lothu·té. thikÁ tsi? úhka? ok ohna?ká·shu?

Né-n lo-athute? thikÁ tsi? úhka? ok ohna?ká·shu?

ASSERTION 3M.SG.P-hear-STV that COMP someone along behind

ta·yá·,

t-a-yá-e-?

CISLOC-FACT-3FI.A-come,go-PNC

'And so he heard someone coming along behind (him)', (Norma Kennedy,
My Father's Encounter, 74 (11))

- (31) Coindexing across clauses

washakotihlo·lí· *tsi?* *na·hotiliho?tákake?*

wa-shakoti-hloli-? tsi? n-aa-hoti-lihw-o?ták-hak-e?

FACT-3>3M.PL-tell-PNC COMP PART-OPT-3M.PL.P-matter-kind.of-CONT-PNC

ná *wahotínyake?*,

ná *wa-hotí-nyak-e?*

when FACT-3M.PL.P-marry-PNC

'they would tell them what their life should be like when they got
married,' (Hazel Cornelius, *Starting Life Together*, 180 (10))

6 Conclusions

Two verbal prefixes in Oneida, the reflexive and the semi-reflexive, function to coindex arguments of the verb. The basic function of the reflexive is to coindex a proto-agent and proto-patient; the dualic prepronominal prefix adds reciprocal meaning. The semi-reflexive is used for verbs of grooming and body care; it also derives anticausatives and meanings expressed by the middle voice in other languages. Both the reflexive and semi-reflexive derive verbs with meanings that cannot be determined simply from combining a coindexing function of the prefixes with the meaning of the verb to which the prefixes are added, and this is especially true of the semi-reflexive. This unpredictability is not surprising for a morphological formation.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

CISLOC	cislocative	JOIN	joiner vowel
COMP	complementizer	NSF	noun suffix
CONT	continuative	PART	partitive
DLC	dualic	PNC	punctual aspect
FACT	factual mode	POSS	possessive
FI	feminine-indefinite	SEMIREFL	semi-reflexive
FUT	future mode	SG	singular
FZ	feminine-zoic	STV	stative aspect
HAB	habitual aspect	TRANSLOC	translocative

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Chapter 27

Reflexive constructions in Yaqui

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In Yaqui (Uto-Aztecán, Mexico), coreferential participants within the same clause can be expressed by reflexive pronouns or nonreflexive personal pronouns. Reflexive pronouns express agent-patient and agent-beneficiary coreference; when noncoreferential, the patient and the beneficiary take accusative case. Nonreflexive personal pronouns express the coreference between the agent and several other semantic roles (e.g., theme, interlocutor, recipient, source, location); when noncoreferential, these participants take oblique case. The agent-possessor coreference alternates: it is usually expressed by nonreflexive pronouns but, under certain circumstances, it is reflexive-marked. These patterns suggest that the use of reflexive pronouns in Yaqui is syntactically conditioned, i.e., reflexive pronouns cannot be combined with postpositions and cannot serve as adnominal modifiers.

1 Introduction

It is a universal tendency that languages avoid using two or more coreferential full NPs within the same clause. As a result of this tendency, coreferential NPs can be marked in two different ways: one of the coreferential NPs may be replaced by a (reflexive) pronoun, or it may be deleted; in the latter case the verb may receive a special reflexive marking (Kemmer 1993; Kazenin 2001; König & Gast 2008; Haspelmath 2023 [this volume]). There are two ways to express coreferential participants in Yaqui: by use of reflexive pronouns and by use of nonreflexive personal pronouns. Reflexive pronouns are used when the agent is coreferential with the patient (1a) or the beneficiary (1b). Nonreflexive pronouns are used when the agent is coreferential with the recipient (1c), or other semantic roles. When taking non-coreferential NPs, *a'ana* ‘dress’ takes an accusative



patient, *maka* ‘give’ takes an accusative beneficiary, and *bittua* ‘send’ takes an oblique recipient. In Yaqui, oblique core arguments are marked by postpositions.

- (1) a. *Ino=ne a'ana-n.*
1SG.REFL=1SG.NOM dress-IPFV
'I dressed myself.'
- b. *Joan-∅ u-ka toto'i-ta emo maka-k.*
John-NOM DET-ACC hen-ACC REFL give-PFV
'John gave the hen to himself.'
- c. *Lupe-∅ supem a-u bittua-k.*
Lupe-NOM cloth.PL 3SG.OBL-DIR send-PFV
'Lupe sent clothes to him/her/it, to herself.'

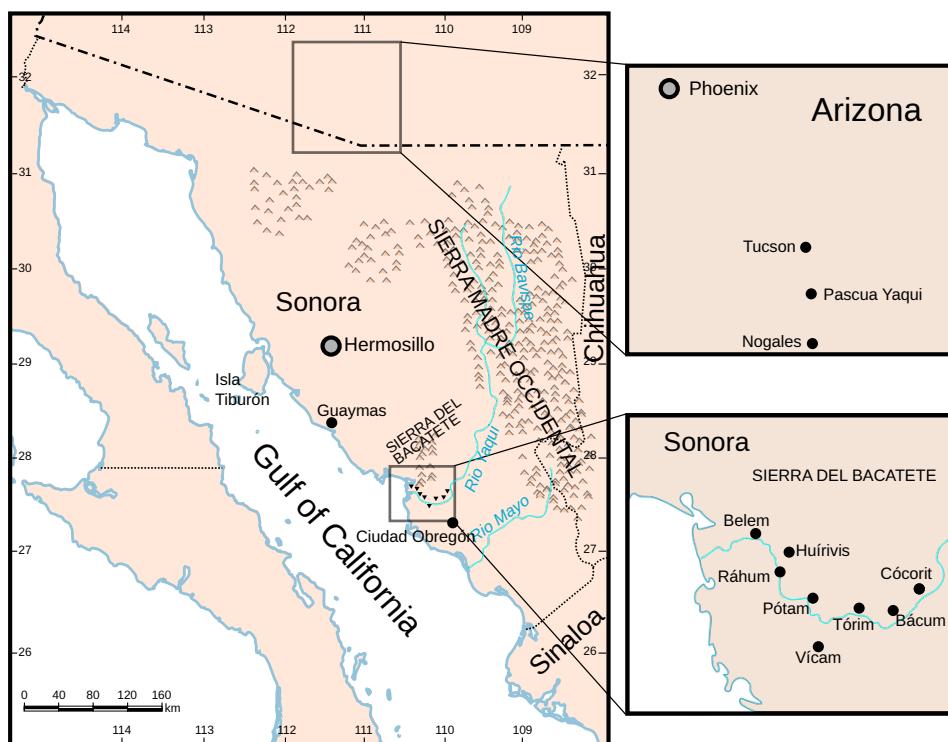
Accordingly, coreferential participants in direct (1a) and indirect (1b) reflexive constructions are marked by reflexive pronouns, whereas coreferential participants in oblique reflexives (1c) are expressed by nonreflexive personal pronouns. Strictly speaking, oblique reflexives are not reflexive constructions because there is no special form that signals the coreference (Haspelmath 2023 [this volume]). Note that nonreflexive pronouns in (1c) allow a disjoint reference interpretation. In this chapter, coreferential constructions without a special form are called non-reflexive constructions. The agent-possessor coreference is slightly more complex: it is usually expressed by nonreflexive pronouns unless the anaphoric pronoun occupies the object position, i.e., direct and indirect reflexive constructions. Based on these patterns, I propose that the use of reflexive pronouns in Yaqui is syntactically conditioned, i.e., reflexive pronouns cannot be combined with postpositions and cannot function as adnominal modifiers.

I begin this chapter by presenting some basic information about the Yaqui language, (§1.1–§1.2). In §2, I give a summary of the pronominal system, and briefly touch on reflexive coding in other Uto-Aztecan languages. In §3, I present the analysis of direct, indirect, oblique, and adposessive reflexive domains. Then, I discuss some issues on middle voice (§4) and coreferential NPs outside simple clauses (§5). In §6, I offer some conclusions. The analysis is based on data from oral texts and data collected by the reflexive questionnaire by Janic & Haspelmath (2023 [this volume]).

1.1 Yaqui and the Uto-Aztecan family

Yaqui belongs to the Uto-Aztecan language family, one of the largest and most widespread language families in the Americas, with representative languages

spoken from the western United States all the way to southern Mexico. Uto-Aztecán languages are classified into a southern branch and a northern branch. The southern branch includes Tepiman, Corachol, Nahuatl, and Taracahita languages; the last group includes Yaqui, Mayo, Guarajío and Tarahumara. Historically, Yaqui was spoken by the Yoeme people living along the Río Yaqui, in Sonora, Mexico and, following the Mexican Revolution of 1920, a large group of Yaqui speakers settled in Arizona, United States. Today, there are fewer than 1,000 speakers in Arizona (Simons & Fennig 2017) and approximately 16,500 speakers in Sonora (Instituto Nacional de Estadística y Geografía 2010), where Yaqui is spoken in several communities spread across eight towns (Figure 1). The data analyzed in this chapter come from one of these Sonoran communities, Vícam, where Yaqui is spoken in daily life and taught in several bilingual elementary schools. By age six, most community members are bilingual speakers of Yaqui and Spanish.



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Figure 1: Yaqui communities (adapted from Estrada 2009: 18)

1.2 Basic morphosyntactic features of Yaqui

Yaqui is an agglutinating, dependent-marking, head-final, primary object language (Lindenfeld 1973; Escalante 1990; Dedrick & Casad 1999; Félix 2000; Guerrero 2006). It is the only southern Uto-Aztec language still spoken where case marking on nominals is preserved. Yaqui distinguishes between direct core arguments (marked by nominative and accusative case) and oblique core arguments (marked by postpositions). In nominals, the nominative is morphologically unmarked, and the accusative is marked by *-ta* (2a–2b). There are some issues related to direct case marking that I would like to elaborate upon. First, the nominative and accusative affixes and the plural suffix *-(i)m* are mutually exclusive, meaning that plural arguments only take the plural suffix, as does *ume o'ouim* ‘the men’ in (2b). Second, the accusative *-ta* covers several grammatical functions, including the possessed noun inside the genitive phrases in (2c) and the nominal complement of some postpositions in (2d) and (3a) below.¹

- (2) a. *U-* \emptyset *chu'u-* \emptyset *batwe-u bwite-k.*
 DET-NOM dog-NOM river-DIR run.SG-PFV
 ‘The dog ran to the river.’
- b. *U-me o'ou-im u-ka* *chu'u-ta bicha-k.*
 DET-PL man-PL DET-ACC dog-ACC see-PFV
 ‘The men saw the dog.’
- c. *Joan-ta juubi-* \emptyset *ne=bicha-k.*
 John-ACC wife-NOM 1SG.ACC=see-PFV
 ‘John’s wife saw me.’
- d. *Lupe-* \emptyset *bwa'a-m-ta mabeta-k u-e kobanao-ta-betana.*
 Lupe-NOM eat-NMLZ-ACC receive-PFV DET-OBL government-ACC-from
 ‘Lupe received food from the government.’

Postpositions such as the directional *-u* ‘to’, the locatives *-po* ‘in, on’ and *-t* ‘at, on the top of, about’, and a few others mark oblique core arguments. In (2d), the third participant of a three-place predicate is marked by *-betana* ‘from’. In (3a–3b), the second argument of the two-place predicates take *-u* ‘to’ and *-t* ‘about’. When present, determiners reflect the case marking of the head noun. Thus, they are unmarked when modifying a nominative NP (2a), take *-ka* when modifying

¹See Guerrero (2019a,c, 2022a) for a detailed discussion of direct and oblique core arguments, the syntactic functions of the suffix *-ta*, and the use of postpositions as oblique case markers. There is also a set of nouns that are always plural, e.g., *supem* ‘clothes’ (1c). In these cases, the plural suffix is not morphologically segmented.

an accusative NP (2b), *-me* when the NP is plural (2b) and (3a), and *-e* if the NP is marked by a postposition (2d) and (3a). The absence of a determiner favors an indefinite reading of the NP, as *bwa'am* 'food' in (2d). Clause-level word order is rigidly SOV, but other orders are possible, e.g., postverbal phrases.

- (3) a. *U-me yoeme-m u-e jamut-ta-u jina'ateo-*Ø.
DET-NOM man-NOM DET-OBL woman-ACC-DIR complain-PRS
'The men are complaining with the woman.'
- b. *Jaibu=ne ae-t ju'unea-*Ø.
already=1SG.NOM 3SG.OBL-LOC know-PRS
'I already know about it.'

Verbs in Yaqui do not inflect for person or number, though a number of verbs have suppletive stems that show number agreement, as in (2a). There are few intransitive/transitive verb pairs coded by suppletion, e.g. *uba/ubba* 'take a bath/-bathe someone', and many verb pairs that morphologically distinguish between an intransitive form ending in *-e*, *-te* or *-ke* and a transitive form ending in *-a*, *-ta* or *-cha* (Dedrick & Casad 1999; Guerrero 2004). When the basic stem describes a change of state, the intransitive/transitive endings encode spontaneous/causative change of state distinction (4a–4b); these verbs have a stative counterpart ending in *-i*, *-ti* or *-ia* that encodes a result state, (4c). The examples in (4) show the three aspectual classes of the verb 'break'. When the stem denotes an active predicate, the endings merely indicate syntactic transitivity, as in *tubukte/tubukta* 'jump/jump something'. It is not the case, however, that all verbs ending in *-e* are intransitive and/or have a transitive counterpart, and vice versa, not all verbs ending in *-a* must be transitive and/or have an intransitive counterpart.

- (4) a. *Empo mesa-ta kok-ta-k.*
2SG.NOM table-ACC break-TR-PFV
'You broke the table.'
- b. *U-Ø mesa-Ø kok-te-k.*
DET-NOM table-NOM break-INTR-PFV
'The table broke.'
- c. *U-Ø mesa-Ø kok-ti-Ø.*
DET-NOM table-NOM break-STA-PRS
'The table is broken.'

Previous studies on Yaqui verbs have focused on valency-changing functions, e.g. valency and transitivity (Álvarez González 2007; Estrada et al. 2015; Tubino 2017), causative (Guerrero 2008; Tubino 2011), applicative (Guerrero 2007, 2022b), and passive (Escalante 1990). These mechanisms are marked by verbal suffixes. For instance, the causative suffix *-tua* adds a new (agent) argument to the verb; the example in (5a) corresponds to the causative version of (4a). The suffix *-wa* marks passive and impersonal clauses. Compare the active clause in (4a) and the *-wa* clauses below. In the passive version, the accusative object serves as the nominative subject (5b), whereas in the impersonal version, the object remains the same, i.e., an accusative object (5c). In *-wa* clauses, the agent cannot be expressed syntactically.

- (5) a. *Inepo mesa-ta enchi kok-ta-tua-k.*
1SG.NOM table-ACC 2SG.ACC break-TR-cause-PFV
'I made you break the table.'
- b. *Mesa-Ø kok-ta-wa-k.*
table-NOM break-TR-PASS-PFV
'The table was broken.'
- c. *Mesa-ta kok-ta-wa-k.*
table-ACC break-TR-PASS-PFV
'(Someone) broke the table.'

The expression of reflexives, reciprocals, and middles has been largely ignored in Yaqui grammar. Unlike applicative, causative, and passive constructions, they do not use verbal affixes, but instead use pronominal forms. Before I begin the discussion of these often overlooked constructions, a few words on the Yaqui pronominal system are needed.

2 The pronominal system

2.1 Personal pronouns

The Yaqui pronominal system formally distinguishes between nominative, accusative, oblique, possessive, and self-intensifier functions (Table 1). Pronominal elements range in status from fully independent forms to clitics and affixes. Additionally, there are full and reduced pronouns. Full pronouns, such as *inepo* 'I' in (5a), behave like lexical elements in terms of their distribution, while reduced

nominative pronouns can behave like “second position” clitics, as in (6a). Occasionally, the two forms co-occur, especially for the 1st and 2nd person (6b). Nominative 3rd person pronouns are commonly omitted, and reduced accusatives (available only for 3rd person) tend to cliticize to the verb, as seen in (2c) above. There is also a set of oblique pronouns used as complements of postpositions.

Table 1: Yaqui pronominal system

	Nominative	Accusative	Oblique	Possessive	Emphatic
1SG	<i>inepo, ne</i>	<i>nee, ne</i>	<i>ne-</i>	<i>in, nim</i>	<i>inepola, inepela</i>
2SG	<i>empo, 'e</i>	<i>enchi</i>	<i>e-</i>	<i>em</i>	<i>empola, empela</i>
3SG	<i>aapo, Ø</i>	<i>aapo'ik, a'a, a</i>	<i>a(e)-</i>	<i>aapo'ik, a, -wa</i>	<i>aapola, aapela</i>
1PL	<i>itepo, te</i>	<i>itom</i>	<i>ito-</i>	<i>itom</i>	<i>itepola, itopela</i>
2PL	<i>eme'e, 'em</i>	<i>enchim</i>	<i>emo-,eme-</i>	<i>em, enchim</i>	<i>emepola, emepela</i>
3PL	<i>bempo, Ø</i>	<i>aapo'im, am</i>	<i>ame-</i>	<i>bempo'im, bem</i>	<i>bempola, bempela</i>

- (6) a. *Kuta-m ili=ne yeu=to-toja-n kaa bu-bu'u-m*
 wood-PL little=1SG.NOM out=RED-take-IPFV NEG RED-a.lot-PL
 juni'i.
 although
 ‘I took out wood, even if it was just little by little.’ (Guerrero 2019b;
 HVF: 93)
- b. *Empo='e kaa 'aman wee-'ean.*
 2SG.NOM=2SG.NOM NEG there go-ought
 ‘You ought not go there.’ (Dedrick & Casad 1999: 243)

In Yaqui, personal pronouns are necessarily referential, i.e., they cannot have a non-specific or generic interpretation. For instance, the direct object of *bwa'e* ‘eat’ in (7a) is *tajkaim* ‘tortillas’; this NP can be substituted by the accusative pronoun *am* (e.g. ‘they eat them’). In (7b) the verb takes a non-specific object marked by the prefix *ji'i-* ‘thing’, but *ji'i-* cannot be replaced by an accusative pronoun *a*.

(e.g. ‘they eat it’). Accusative and oblique pronouns are also obligatory when a core argument is extraposed to the right, as illustrated in (7c). In this context, the extraposed NP needs to be topical, as it encodes referents previously introduced in discourse, and it must also be a definite NP (Belloro & Guerrero 2010).

- (7) a. *Bempo tajkaim bwa'e-*Ø.
3PL.NOM tortilla.PL eat-PRS
‘They eat tortillas.’
- b. *Bempo ji'i-bwa'e-*Ø.
3PL.NOM thing-eat-PRS
‘They eat something.’
- c. *Aapo jiba a=bitchu-k, u-ka jamut-ta.*
3SG.NOM always 3SG.ACC=watch-PFV DET-ACC woman-ACC
‘He watched her all the time, the woman.’ (Silva et al. 1998 [Zorra:26])

2.2 Reflexive pronouns

As shown in Table 2, the paradigm of reflexive pronouns in Yaqui varies according to different descriptions of the language. The first column shows the paradigm proposed by Dedrick & Casad (1999: 246). Note that all persons have their own reflexive form except the 2nd and 3rd person plural, which are both coded by *'emo*. The second column presents the reflexive pronouns listed by Estrada (2009: 32). In her paradigm, *emo* also expresses the 2nd person singular and serves as an alternative coding for the 3rd person singular. As shown in (8), reflexive pronouns behave like full pronouns, e.g., they are free forms and occupy the object position (pre-verbally). Yaqui does not allow reflexive pronouns in subject function.

- (8) a. *Hunama beha 'au ko'okoi-su-ka 'au ine'e-te-k.*
there well REFL get.sick-COMPL-PTCP REFL feel-INTR-PFV
‘Well, after having fallen sick, she recovered.’ (Dedrick & Casad 1999: 246)
- b. *Juan-Ø batwe-u emo himaa-k.*
John-NOM river-DIR REFL throw-PFV
‘John threw himself into the river.’ (Estrada 2009: 129)

The third column shows the reflexive pronouns I have found in the field. From the examples in (9a–9b), it is clear that the reflexive pronoun *emo* has extended to all grammatical persons. I also found that, for some young speakers, *emo* alternates with *omo*, as illustrated in (9c).

Table 2: Yaqui reflexive pronouns

Dedrick & Casad (1999)	Estrada (2009)	Field Notes (1997–)	Buelna (1890)
1SG 'ino	ino	ino, emo, omo	inone
2SG 'emp	emo	emo, omo	emore
3SG 'au	au, emo	au, emo, omo	auo
1PL 'ito	ito	ito, emo, omo	itote
2PL 'emo	emo	emo, omo	emorem
3PL 'emo	emo	emo, omo	emorim

- (9) a. *Kuta-e=ne emo beeба-k.*
 stick-with=1SG.NOM REFL hit-PFV
 'I hit myself with the stick.'
- b. *Empo lautia emo supe-tua-∅.*
 2SG.NOM quick REFL dress-cause-PRS
 'You get dressed yourself very quickly.'
- c. *Wa'a-∅ ili jamut-∅ si yolisia omo chichike-∅.*
 DEM-NOM little woman-NOM INT pretty REFL brush-PRS
 'That girl brushes herself very prettily'

Therefore, the reflexive pronouns *ino*, *au*, and *ito* can be called personal reflexive pronouns since they vary according to the person of the subject. Since *emo* ~ *omo* can co-refer with any person, it can be considered a general reflexive pronoun ‘self’. Apparently, there are no differences in use between personal reflexive pronouns and the ‘self’ form. It is important to distinguish the reflexive pronoun *au* ‘himself/herself/itself’ in (8a) from the homophonous oblique *a-u* ‘to him/her/it’ in (10a). First, the reflexive *au* cannot be split morphologically, and thus cannot take a plural form to indicate a plural referent, though the oblique pronoun can, (10b). Second, reflexive *au* cannot combine with case markers and postpositions, while the oblique pronoun is the base for all postpositions. And third, several Yaqui verbs take oblique arguments marked by the directional postposition *-u* (Guerrero 2019a,c, 2022a). However, most of these verbs do not accept reflexive readings. In (10) the participants are non-coreferential; the intended reflexive reading for (10a) is ungrammatical because, according to my consultants, ‘it does not make any sense to talk to oneself’.

- (10) a. *Peo-*∅ *a-u* *nooka-k.*
Peter-NOM 3SG.OBL-DIR talk-PFV
'Peter talked to him/her/it, *to himself.'
- b. *Inepo* *ame-u* *wat-te-k.*
1SG.NOM 3PL.OBL-DIR miss-INTR-PFV
'I missed them.'

2.3 Historical notes on reflexive pronouns

Langacker (1977: 47) claims that "innovation, loss, and modifications of reflexive pronouns is an exceedingly complex subject in the Uto-Aztecán grammar". For Proto-Uto-Aztecán, Langacker reconstructs the reciprocal verbal prefix **na-*, and the reflexive verbal prefixes **ni-* 'myself', **ta-* 'ourselves', **i-* 'yourselves', and **mo-* for all other persons. The reflexive prefixes have been lost in all northern languages; hence the reciprocal prefix indicates both senses. In some southern languages, reflexive pronouns may cover both functions.

There are no known historical documents on Yaqui that permit us to trace the evolution of its reflexive forms, though there is a grammatical sketch of Cahita (Buelna 1890), a linguistic ancestor of Yaqui and two related languages, Mayo and Tehueco (now extinct). In Buelna's sketch of Cahita, reflexive pronouns (Table 2, last column) include *inone* 'myself', *emore* 'yourself', *auo* 'him/herself/itself', *itote* 'ourselves', *emorem* 'yourselves', *emorim* 'themselves'; see the example in (11).

- (11) *Emore* *mahau-tua.*
2SG.REFL scare-cause
'You make yourself scare.' (Buelna 1890: 53)

Except for their endings, Cahita and Yaqui reflexive pronouns look remarkably similar. In fact, one can see the diachronic evolution of the reflexive verb prefix **mo-* in Proto-Uto-Aztecán (used for 2nd and 3rd person singular and 3rd person plural) to the reflexive pronoun *emo* ~ *omo* in Yaqui (now used for all persons). It is also worth noting that, within the Taracahita group, Yaqui is the only language that has both personal reflexive pronouns (*ino*, *au*, *ito*) and a general reflexive form (*emo* ~ *omo*). The Tarahumara languages only make use of two general reflexive pronouns, e.g. *binóipi* for singular and *abóipi* for plural (Caballero 2002). Guarajío has no distinct reflexive pronouns, but coreferential NPs are coded by anaphoric non-nominative personal pronouns (Félix 2005).

2.4 Self-intensifier pronouns

Buelna (1890) also lists two sets of emphatic pronouns in Cahita. The first group ends in *-riua* or *-e*, as in *empe* for the 2nd person singular (12a). The second group ends in *-(e)la*, as in *empola* ‘you alone, by yourself’. The second pronominal set is preserved in Yaqui (fifth column, Table 1) and in (12b). Whereas Buelna (1890: 53–54) calls these forms ‘semi-pronouns’, Dedrick & Casad (1999: 243–244) call them “emphatic reflexive subject pronouns”.

- (12) a. *Empe aman sim-naque.*
 2SG.EMPH there go.SG-want
 ‘You (by yourself) will go there.’ (Buelna 1890: 53)
- b. *'Aapela 'am kooba-k.*
 3SG.EMPH 3SG.ACC win-PFV
 ‘He beat them all by himself’ (Dedrick & Casad 1999: 244)

These pronominal forms do not trigger a reflexive meaning, but they function as self-intensifiers (König 2001; Haspelmath 2023 [this volume]). They can occur by themselves (13a), be adjacent to the coreferential NP (13b), or co-occur with the general reflexive ‘self’ (13c). When translated into Spanish, these structures generally correspond to the adverbial *solo* ‘alone’.

- (13) a. *Inepola Potam-meu-bicha bwite-k.*
 1SG.EMPH Potam.PL-DIR.PL-towards run.SG-PFV
 ‘I ran towards Potam by myself’
- b. *U-∅ kora-∅ aapela weche-k.*
 DET-NOM corral-NOM 3SG.EMPH fall.SG-PFV
 ‘The corral fell down by itself’
- c. *Inepo=ne kaa enchi beba-k, empola emo beba-k.*
 1SG.NOM=1SG.NOM NEG 2SG.ACC hit-PFV 2SG.EMPH REFL hit-PFV
 ‘I didn’t hit you, you hit yourself’

3 Yaqui reflexive constructions

“Reflexive” is a cover term that has, at least, two senses: it may refer to the coreference between two participants in a minimal clause, and/or it may refer to the forms that signal coreference (Kemmer 1993; Frajzyngier & Curl 1999; König & Gast 2008; Creissels 2016). In (14a), the accusative clitic signals a disjoint-reference between the agent and the patient; in (14b) the agent and the patient

are the same person, hence there must be a reflexive pronoun in object position. In the present description, semantic roles like agent, patient, and recipient are used in a broad sense.²

- (14) a. *U-*∅ *maejo-*∅ *si Peo-ta uttia-*∅.
DET-NOM teacher-NOM INT Peter-ACC admire-PRS
'The teacher admires Peter a lot.'
- b. *U-*∅ *maejo-*∅ *si omo uttia-*∅.
DET-NOM teacher-NOM INT REFL admire-PRS
'The teacher admires himself a lot.'

In what follows, reflexive constructions with reciprocal meaning (§3.1), direct (§3.2), indirect (§3.3), oblique (§3.4), and adposessive reflexive domains (§3.5) are first discussed, followed by middle voice (§4), and coreferential NPs in complex constructions (§5).

3.1 Reflexive constructions with reciprocal meanings

Yaqui reflexive pronouns allow a reciprocal reading when the antecedent (coreferential agent) is plural. The construction in (15a) is ambiguous: it can mean 'they lick themselves' or 'they lick each other'. In (15b), the combination of the reflexive and the adverbial *nau* 'together' highlights the reciprocal interpretation.³ The reciprocal meaning is not limited to the form *emo*, as confirmed by (15c) with the 1st person plural reflexive pronoun.

- (15) a. *U-me ili miisi-m emo te'ebwa-*∅.
DET-PL little cat-PL REFL lick-PRS
'The kittens are licking themselves/each other.'

²The use of semantic roles instead of terms like subject, object, and indirect object in this chapter is purposeful. While the terms subject and object may be unproblematic, the term 'indirect object' is inadequate in Yaqui grammar for two three main reasons (Guerrero 2019a,c, 2022a). (i) Even though some authors have considered *-u* to be a dative, indirect marker (Estrada 2009), *-u* is one among several postpositions marking oblique arguments (recall the examples in 3); (ii) *-u* can introduce several semantic roles not necessarily related to dative arguments (e.g., source); (iii) the coding of the third participant in three-place predicates varies: it can take accusative, and it can be marked by *-u* or by other postpositions (Guerrero & Van Valin 2004). The use of semantic roles avoids one having to use multiple syntactic terms for this function (e.g., indirect object, primary object, directional object, locative object).

³Most likely, *nau* is related to the reciprocal verbal prefix *na- reconstructed for Proto-Uto-Aztecán (Langacker 1977). However, the adverbial *nau* is not limited to reciprocal meanings in Yaqui.

- b. *U-me ili miisi-m nau emo te'ebwa-*∅.
 DET-PL little cat-PL together REFL lick-PRS
 ‘The kittens are licking each other.’
- c. *Pues nanancha te ito ania-taite-k.*
 well equally 1PL.NOM 1PL.REFL help-start-PFV
 ‘So, both of us started to help ourselves/each other.’ (Guerrero 2019b;
HVF: 371)

3.2 Direct reflexive constructions

Cross-linguistically, the most common pattern of coreferential participants involves two-place predicates, with the agent as the antecedent and the patient as the anaphoric form. This coreferential pattern exemplifies the “autopathic domain” (Haspelmath 2023 [this volume]) or, more simply put, direct reflexives (Kemmer 1993: 41; Kazenin 2001: 918). In (16a), *bicha* ‘see’ takes a non-coreferential agent and patient, hence there is an accusative NP; in (16b) the two participants are coreferential and there is a reflexive pronoun in object position.

- (16) a. *U-*∅ *ili jamut-*∅ *Peo-ta bicha-k.*
 DET-NOM little woman-NOM Peter-ACC see-PFV
 ‘The girl saw Peter.’
- b. *U-*∅ *ili jamut-*∅ *eipeeko-po emo bichu-k.*
 DET-NOM little woman-NOM mirror-LOC REFL see.COMPL-PFV
 ‘The girl saw herself in the mirror.’

Reflexive pronouns satisfy the syntactic valency of transitive verbs. Compare the intransitive-transitive verb pairs in (17). The transitive form *omta* ‘hate’ takes a non-coreferential NP in (17a) and a reflexive pronoun when the agent is coreferential with the patient in (17b); the intransitive counterpart *omte* disallows the occurrence of the reflexive pronoun (17c).

- (17) a. *Joan-*∅ *Peo-ta om-ta-*∅.
 John-NOM Peter-ACC hate-TR-PRS
 ‘John hates Peter.’
- b. *Joan-*∅ *au om-ta-*∅.
 John-NOM 3SG.REFL hate-TR-PRS
 ‘John hates himself.’

- c. * *Joan-*∅ *au om-te-*∅.
John-NOM 3SG.REFL hate-INTR-PRS
'John hates himself.'

The suppletive transitive verb *me'a* 'kill' takes a non-coreferential anaphoric pronoun in (18a), and a reflexive pronoun in (18b). Again, the intransitive form *muuke* 'die' in (18c) disallows reflexive pronouns. It means that, within the autopathic domain, reflexive pronouns combine with the morphologically marked transitive verb form.

- (18) a. *Joan-*∅ *a=me'a-k.*
John-NOM 3SG.ACC=kill.SG-PFV
'John killed him/her/it.'
- b. *Juan-*∅ *omo me'a-k.*
John-NOM REFL kill.SG-PFV
'John killed himself.'
- c. * *Juan-*∅ *omo muuke-k.*
John-NOM REFL die.SG-PFV
'John killed himself.'

3.3 Indirect reflexive constructions

The expression of indirect reflexives, that is, the coreference of the agent with a participant other than the patient (recipient, goal, beneficiary) has received little focus in the literature (Kemmer 1993; Kazenin 2001: 918). There are two types of indirect reflexives in Yaqui and both involve the beneficiary. The first type includes a few three-place predicates. For example, the verb *maka* 'give' takes an accusative theme and an accusative beneficiary in (19a). When the agent is coreferential with the beneficiary as in (19b), there is a reflexive pronoun. In addition to *emo*, one of my consultants also made use of the nominative personal pronoun as a reinforcement element. In (19c), the agent and the beneficiary of *majta* 'teach' are the same person.

- (19) a. *Juana-*∅ *mo'obei-ta Lupe-ta maka-k.*
Juana-NOM hat-ACC Lupe-ACC give-PFV
'Juana gave Lupe a hat.'
- b. *Juana-*∅ (*aapo*) *mo'obei-ta omo maka-k.*
Juana-NOM 3SG.NOM hat-ACC REFL give-PFV
'Juana gave a hat to herself.'

- c. *Aapo jiak-nok-ta emo majta-siime-Ø in pamiiiam-mak.*
 3SG.NOM yori-talk-ACC REFL teach-go.SG-PRS 1SG.POSS family.PL-with
 ‘She tries to teach herself Yaqui with my family.’ (Buitimea 2007;
pueplou: 106)

The second and most common type of indirect reflexive construction involves applicative constructions. In Yaqui, the applicative suffix *-ria* combines with stative, intransitive, and transitive verbs; when associated with transitive verbs, it adds a new (applied) argument with the role of beneficiary. Compare (20a–20b). In the non-derived clause, the beneficiary is coded as an adjunct marked by the postposition *betchi’ibo* ‘for’; in the applicative counterpart, the same participant is coded as an accusative NP. In (20c–20d) the agent and the beneficiary are coreferential; in the non-derived version, the coreferential NP is coded as an oblique pronoun, while in the applicative version, the reflexive pronoun serves as the applied argument. An additional example is presented in (20e).

- (20) a. *Kari-ta=ne jinu-k Maria-ta-betchi’ibo.*
 house-ACC=1SG.NOM buy-PFV Mary-ACC-for
 ‘I bought a house for Mary.’
- b. *Kari-ta=ne Maria-ta jinu-ria-k.*
 house-ACC=1SG.NOM Mary-ACC buy-APPL-PFV
 ‘I bought Mary a house.’
- c. *Emo kari-ta jinu-k e-betchi’ibo.*
 2SG.NOM house-ACC buy-PFV 2SG.OBL-for
 ‘You bought a house for yourself.’
- d. *Emo kari-ta emo jinu-ria-k.*
 2SG.NOM house-ACC REFL buy-APPL-PFV
 ‘You bought yourself a house.’
- e. *Komo=ne jaibu ju’unea ISSSTE-po bea=ne ino nok-ria-ne.*
 like=1SG.NOM already know ISSSTE-LOC DM=1SG.NOM 1SG.REFL talk-APPL-POT
 ‘Since I was already familiar with ISSSTE, I could defend myself.’
 (Guerrero n.d. *HVL*: 201)

As pointed out by Zúñiga & Kittilä (2010: 4), while some languages ban agents from being beneficiaries in the same clause, others may use a special construction in these cases, i.e., self-benefactives. Yaqui is a good example of a language that makes use of applicative self-benefactive constructions.

3.4 Oblique nonreflexive constructions

As mentioned previously, adjuncts and oblique core arguments are marked by postpositions. When the complement of a postposition is pronominal, it must take the form of an oblique pronoun. However, reflexive pronouns do not combine with postpositions. In (20c) above, the pronominal complement of *betchi'ibo* ‘for’ is *e-* ‘for you’, instead of the reflexive form *emo*. In the examples below, the agent is coreferential with the theme (21a) and the interlocutor (21b) of speech act verbs, the recipient (21c), as well as the location (21d). In all these cases, there is an anaphoric personal pronoun. When the participant refers to the 3rd person, the construction is ambiguous; both coreferential and non-coreferential readings are possible. In (21b), the nonreferential oblique pronoun *ae* can refer to Mary, Lupe, or someone else.

- (21) a. *Fermin-∅ ae-t nooka-k.*
 Fermin-NOM 3SG.OBL-LOC talk-PFV
 ‘Fermin talked about him/her/it, about himself.’
- b. *Maria-∅ Lupe-ta-mak ae-betana etejo-k.*
 Mary-NOM Lupe-ACC-with 3SG.OBL-from tell-PFV
 ‘Mary talked with Lupe about her/him/it, about Mary, about Lupe.’
- c. *Inepo ne-u ji'i-jioste-bae-∅.*
 1SG.NOM 1SG.OBL-DIR thing-write-want-PRS
 ‘I want to write something to myself.’
- d. *U-∅ amureo-∅ maso-ta ae-bicha-po bicha-k.*
 DET-∅ hunter-NOM deer-ACC 3SG.OBL-toward-LOC see-PFV
 ‘The hunter saw a deer in front of him/her/it, in front of himself.’

The examples below illustrate agent-goal (22a) and agent-source (22b–22c) coreference in three-place predicates. Note that the nonreflexive personal pronoun can be implicit (22c). According to my consultants, an implicit goal or source favors a coreferential reading.

- (22) a. *U-∅ jamut-∅ mo'obei-ta ea-t yecha-k.*
 DET-NOM woman-NOM hat-ACC 3SG.OBL-LOC put.SG-PFV
 ‘The woman put a hat on her/him/it, on herself.’
- b. *U-∅ jamut-∅ relo-ta a-u u'ura-k.*
 DET-NOM woman-NOM watch-ACC 3SG.OBL-DIR take-PFV
 ‘The woman took the watch off him/her/it [the arm], off herself.’

- c. *U-* \emptyset *jamut-* \emptyset *lentem u'ura-k.*
 DET-NOM woman-NOM glasses take-PFV
 'The woman took off the glasses.'

3.5 Adposessive nonreflexive constructions

In some languages, reflexive pronouns can combine with possessive pronouns to show agent-possessor coreference (Haspelmath 2023 [this volume]). As shown in Table 1 above, Yaqui has a set of possessive pronouns. When the agent refers to the 1st and 2nd person, the corresponding 1st and 2nd possessive forms are used; see the example in (23a). When the agent refers to the 3rd person, there are three coding options: the possessive suffix *-wa* (23b), the possessive pronoun *a* and *-wa* (23c), and a genitive phrase (23d). Even though the most likely reading of (23b–23c) is coreference, a disjoint-reference interpretation is also possible. The explicit use of a genitive phrase leads to a disjoint-reference reading. The same referential ambiguity prevails with an alienable possessee as in (23e). Note that possessive NPs in object position optionally take the accusative suffix *-ta*; genitive phrases disallow a second suffix *-ta*.

- (23) a. *Inepo nim soa(-ta) ubba-k.*
 1SG.NOM 1SG.POSS son-ACC bath.TR-PFV
 'I bathed my son.'
 b. *Lupe-* \emptyset *asoaw(-ta) ubba-k.*
 Lupe-NOM son-POSS-ACC bath.TR-PFV
 'Lupe bathed her/his son.'
 c. *Lupe-* \emptyset *a asoaw(-ta) ubba-k.*
 Lupe-NOM 3SG.POSS son-POSS-ACC bath.TR-PFV
 'Lupe bathed her/his son.'
 d. *Lupe-* \emptyset *Maria-ta a soa ubba-k.*
 Lupe-NOM Mary-ACC 3SG.POSS son bath.TR-PFV
 'Lupe bathed Mary's son.' (lit. bathed Mary's her son)
 e. *Joan-* \emptyset *tekile-u a karro-wa-po siika.*
 John-NOM work-DIR 3SG.POSS car-POSS-LOC go.SG.PFV
 'John went to work on his own car.'

When the possessee is a body part, the use of possessive pronouns is complex, and this is true of both coreferential and non-coreferential participants (Guerero 2020). The clause in (24a) was rejected by two of my consultants and was

considered odd by a third one. In this context, there are two coding options: the body part is unpossessed and keeps the accusative case (24b), or it is unpossessed and is marked by locative postpositions (24c). The former results in referential ambiguity, while the latter bears a coreferential sense. With disjoint-reference, an external possessive construction is also possible (24d).

- (24) a. # *Joan-*∅ *a koba-(ta) beba-k.*
 John-NOM 3SG.POSS head-ACC hit-PFV
 ‘John hit his head.’ (=John’s head or someone’s else’s)
- b. *Joan-*∅ *koba-ta beba-k.*
 John-NOM head-ACC hit-PFV
 ‘John hit his head.’ (=John’s head or someone’s else’s)
- c. *Joan-*∅ *koba-po beba-k.*
 John-NOM head-LOC hit-PFV
 ‘John hit his head.’ (lit. hit on head) (=John’s head)
- d. *Joan-*∅ *koba-t enchi beba-k.*
 John-NOM head-LOC 2SG.ACC hit-PFV
 ‘John hit you on the head.’

The examples in (23–24) confirm that agent-possessor coreference does not use reflexive pronouns in Yaqui. The clause in (25a) is ruled out because there is a reflexive pronoun serving as a possessive pronoun; (25b) is also ruled out because there is an accusative NP and a reflexive pronoun in the same clause. The presence of an overt possessive pronoun with a reflexive form would also be ruled out, e.g., *a omo*.

- (25) a. * *Joan-*∅ *omo koba-ta beba-k.*
 John-NOM REFL head-ACC hit-PFV
 ‘John hit his (own) head.’
- b. * *Joan-*∅ *koba-ta omo beba-k.*
 John-NOM head-ACC REFL hit-PFV
 ‘John hit himself on the head.’

Nevertheless, there are two contexts in which adposessive coreference might be expressed by reflexive pronouns. In the first context, the possessee is coded as an oblique (locative) argument and the anaphoric reflexive pronoun occupies the object position; the reflexive counterpart of (24c) is illustrated in (26a). In the second context, the possessor is introduced as an applied argument within

an applicative construction; compare (26b–26c). The first option corresponds to direct reflexives, and the second to indirect reflexives.

- (26) a. *Joan-*∅ *koba-po omo beba-k.*
John-NOM head-LOC REFL hit-PFV
'John hit his head.' (lit. hit himself on the head)
- b. *U-*∅ *ili jamut-*∅ *pujba-ta baksia-k.*
DET-NOM little woman-NOM face-ACC wash-PFV
'The girl is washing her face.'
- c. *U-*∅ *ili jamut-*∅ *pujba-ta au baksia-ria-k.*
DET-NOM little woman-NOM face-ACC 3SG.REFL wash-APPL-PFV
'The girl is washing her face.' (lit. washing herself the face)

The discussion on coreferential oblique and possessive participants suggests that it is not the semantic role but its syntactic function that determines whether or not a reflexive pronoun is used in Yaqui, i.e., reflexive pronouns cannot be complements of postpositions and cannot be associated with adnominal possession. The use of nonreflexive personal pronouns in these domains oscillates between coreference readings and disjoint interpretations. The actual interpretation depends on the linguistic context and/or discourse-pragmatic information.

4 Reflexive pronouns and middle situations

In middle situations, the agent participant is viewed as the doer of the action as well as the place on which this action is performed; the doer and the place are construed as one and the same entity (Kemmer 1993; Creissels 2006). In Yaqui, several middle situations are expressed by a reflexive + transitive verb combination, but many others are expressed by non-reflexive-marked intransitive clauses. Grooming verbs that can combine with reflexive pronouns include *baksia* 'wash', *bekta* 'shave', *a'ana* 'dress (formal ceremonies)', *supetua* 'put on clothes', and *chichike* 'comb'. These verbs can take a non-coreferential NP as well as a reflexive pronoun in object position; compare the uses of *baksia* as 'wash something' in (26a) and 'wash something on oneself' in (26b) above, and 'wash oneself' in (27a) below. The examples in (27b–27c) show *bekta* 'shave', and (27d–27e) illustrate *a'ana* 'dress'.

- (27) a. *Joan-*∅ *emo baksia-*∅.
John-NOM REFL wash-PRS
'John washes himself.'

- b. *Joan-ta-ne bekta-k.*
John-ACC=1SG.NOM shave-PFV
'I shave John.'
- c. *Joan-Ø chau-t omo bekta-k.*
John-NOM beard-LOC REFL shave-PFV
'John shaved his beard.' (lit. shave himself on the beard)
- d. *Lupe-Ø ne a'ana-n.*
Lupe-NOM 1SG.ACC dress-IPFV
'Lupe dressed me.'
- e. *Ino=ne a'ana-n.*
1SG.REFL=1SG.NOM dress-IPFV
'I dressed.'

In opposition, grooming verbs like *baima* 'wash hands', *baju'urina* 'wash face', *uba* 'bathe', and *tajo'ote* 'dress (everyday clothing)' are not reflexive-marked. See the use of *baima* in (28a). The last two verbs have a transitive counterpart, but reflexive pronouns are banned in this context. Contrast *ubba* 'bathe someone' in (23) above, with the intransitive version *uba* 'bathe oneself' in (28b). The verb pair *tajo'ota/tajo'ote* 'dress someone/oneself' is illustrated in (28c–28d). The clause in (28e) is ruled out because *tajo'ota* combines with a reflexive pronoun.

- (28) a. *U-Ø ili yoeme-Ø baima-Ø.*
DET-NOM little man-NOM wash_hands-PRS
'The little boy washes hands.'
- b. *Joan-Ø batwe-po uba-Ø.*
John-NOM river-LOC bath.INTR-PRS
'John bathes in the river.'
- c. *Maria-Ø enchi tajo'o-ta-Ø.*
Mary-NOM 2SG.ACC dress-TR-PRS
'Mary dresses you.'
- d. *Empo chumti tajo'o-te-Ø.*
2SG.NOM quickly dress-INTR-PRS
'You dress quickly.'
- e. * *Empo chumti emo tajo'o-ta-Ø.*
2SG.NOM quickly REFL dress-TR-PRS
'You dress yourself quickly.'

In Yaqui, the expression of body-part actions does not necessarily differ from whole-part actions. The reflexive-marked *baksia* ‘wash’ can target a body-part action in (26b–26c) and (27a), but *baima* ‘wash hands’ and *baju’urina* ‘wash face’ are not reflexive-marked. Dressing verbs can be understood as whole-body activities, but *a’ana* combines with reflexive forms and *tajo’ote* does not. In addition, a few body-function action verbs can be used with a reflexive pronoun or not, depending on the degree of affectedness (Frajzyngier & Curl 1999). This is the case of *siise* ‘urinate’, *bwita* ‘defecate’, and *poch’okunte* ‘defecate (outside, in the woods)’. With the reflexive form (29a), the action is assumed to be an accident; without the reflexive (29b), a regular activity is implied. Verbs like *ko’okoi* ‘be/get sick’ and *ine’ete* ‘recover’ in (8a), *elpeiya/peiya* ‘feel/get better’ in (29c), *i’a* ‘be/get spoiled’, and *mammatte* ‘understand’ are also reflexive-marked.

- (29) a. *U-* \emptyset *ili* *uusi-* \emptyset *emo siise-k.*
 DET-NOM little child-NOM REFL urinate-PFV
 ‘The child urinated on himself.’
- b. *U-* \emptyset *ili* *uusi-* \emptyset *siise-k.*
 DET-NOM little child-NOM urinate-PFV
 ‘The child urinated.’
- c. *Into=bea a* *waiwa-* \emptyset *jaibu* *ili* *emo*
 DM=DM 3SG.POSS sister-NOM already little REFL
 pa-p-peiya-n.
 RED-RED-get.better-IPFV
 ‘And then her sister was getting a little better already.’ (Buitimea 2007; *ili baro:* 70)

Non-translational motion and body-posture verbs are mostly unmarked, e.g., *yehete* ‘stand’ in (30a) and *bwalsapte* ‘stretch’ in (30b). The exceptions I have found so far include *cha’ā* ‘hang’ in (30a) and *yooa* ‘tremble’ in (30c) which are reflexive-marked.

- (30) a. *Au* *kom=cha’ā-tu-k* *u-* \emptyset *buuru-* \emptyset *’aman jika-t*
 3SG.REFL down=hang-VBLZ-PFV DET-NOM donkey-NOM there up-LOC
 yehete-k.
 stand.SG-PFV
 ‘The donkey bent down and stood up.’ (Johnson 1962; *burro & coyote:* 34)

- b. *Aapo bwalsap-te-*Ø.
3SG.NOM stretch-INTR-PRS
'He is stretching.'
- c. *Mejiko-po u-*Ø *bwia-*Ø *jiba au yooa-*Ø.
Mexico-LOC DET-NOM earth-NOM always 3SG.REFL tremble-PRS
'In Mexico, the earth always trembles.'

Spontaneous change of state verbs are not reflexive-marked. Compare the intransitive-transitive verb pair in (31a–31b). However, there are a few verbs that combine with reflexive forms: *eta* 'close', *etapo* 'open', *esso* 'hide', *ta'aru* 'lose', *ji-imá* 'throw', *piarora* 'borrow'. Compare (31c–31d). In this context, *emo* functions as a kind of anticausative marker, i.e. it does not imply any potential agent, (31e).

- (31) a. *U-*Ø *ba'am poj-te-k.*
DET-NOM water.PL boil-INTR-PFV
'The water boiled.'
- b. * *U-*Ø *ba'am omo poj-ta-k.*
DET-NOM water.PL REFL boil-TR-PFV
'The water boiled.'
- c. *U-*Ø *jeeka-*Ø *u-ka puenta-ta etapo-k.*
DET-NOM wind-NOM DET-ACC door-ACC open-PFV
'The wind opened the door.'
- d. *U-*Ø *puenta-*Ø *emo etapo-k.*
DET-NOM door-NOM REFL open-PFV
'The door opened.'
- e. *U-*Ø *tomi-*Ø *boosa-po kateka-me emo ta'aru-k.*
DET-NOM money-NOM purse-LOC sit.SG.PFV-NMLZ REFL lose-PFV
'The money that was in the purse got lost.'

Two things appear to be clear at this point: (i) not all morphologically-marked transitive verbs combine with reflexive pronouns, and (ii) the use of reflexive pronouns as middle markers is unpredictable (i.e., lexically determined). The lack of productivity of Yaqui reflexive forms in middle situations contrasts not only with Romance, Germanic, and Slavic languages (see Janic 2023 [this volume] for Polish), but also with other Southern Uto-Aztecan languages. In Southern Tepehuan (García 2005), for example, the use of reflexive pronouns as middle markers is very productive; Pima Bajo (Estrada 2005) uses the 3rd person non-subject as a middle marker; Wixárika (Ramos 2017) uses the reflexive 3rd person prefix *yu-* to signal middle functions.

5 Coreferential participants within complex clauses

Thus far, I have focused on examples of two coreferential NPs within the same clause. However, two participants can also be coreferential within complex constructions. When the main subject and the dependent subject are coreferential, the coding of the anaphoric pronoun depends on the clause linkage type (Guerreiro 2006): some linkage types demand an implicit participant (32a),⁴ others require a possessive (32b) or accusative (32c) anaphoric pronoun, and a few allow anaphoric nominative pronouns (32d). The accusative and the nominative pronouns lead to referential ambiguity.

- (32) a. *Nim achai-∅_i ju'une'ea-k [loteria-ta _i yo'o-kai].*
 1SG.POSS father-NOM know-PFV lottery-ACC win-CLM
 ‘My father knew he had won the lottery.’ (=my father won the lottery)
- b. *Ne_i a-u_j wawate-n [nim_i enchi ji'i-beje-tua-ne-'u]_j.*
 1SG.NOM 3SG.OBL-DIR remember-IPFV 1SG.POSS 2SG.ACC
 thing-cost-cause-POT-CLM
 ‘I didn’t remember (it) to pay you.’
- c. *Jorge-∅_i a-beas_j kopte-k [taream a_i ya'a-ne-po]_j.*
 Jorge-NOM 3SG.OBL-about forget-PFV homework.PL 3SG.ACC
 make-POT-CLM
 ‘Jorge forgot about doing the homework.’
- d. *Peo-∅_i Vicam-meu siika [bweituk aapo_{i/j} kaba'i-ta jinu-n].*
 Peter-NOM Vicam.PL-DIR.PL go.SG.PFV CLM 3SG.NOM horse-ACC
 buy-IPFV
 ‘Peter_i went to Vicam because he_{i/j} bought a horse.’

There are two mental verbs that seem to allow a reflexive pronoun when the two subjects are the same person: *-machia* ‘believe’ and *'ea* ‘think’. The examples in (33) resemble long-distance reflexives; in (33a), the presence of the reflexive seems optional, but not in (33b–33c).

- (33) a. *Ne (ino) tui kaba'i-ta jinu-maachia-∅.*
 1SG.NOM 1SG.REFL good horse-ACC buy-believe-PRS
 ‘I believe I would buy a good horse.’

⁴In (32a), the underscore refers to the missing argument.

- b. *Aapa [lautia emo siim-bae-benasia] 'ea-*Ø.
3SG.NOM early REFL go.SG-want-CLM think-PRS
'She_i has the feeling that she_i wants to go early.'
- c. *Nim ae_i tuisi omo_i ye'e-t-'ea-*Ø *bweta ka luturia.*
1SG.POSS mother good REFL dance-CLM-think-PRS but NEG true
'My mother_i thinks she_i dances pretty well, but it is not true!'

6 Conclusions

As evidenced in this chapter, Yaqui reflexive pronouns signal agent-patient and agent-beneficiary coreferential participants, but they cannot express the coreference between the agent and the recipient, source, goal, theme, location, or possessor. There is a syntactic explanation for these patterns: reflexive pronouns must occupy the object position (autopathic domain) and are thus banned as complements of postpositions (oblique domain) or as adnominal modifiers (adposessive domain). In this context, a nonreflexive personal pronoun must be used. The use of nonreflexive pronouns in the oblique and adposessive domains alternates between coreference readings and disjoint interpretations. Personal pronouns are also preferred in clause combining. Additionally, the use of reflexive pronouns as middle markers is allowed with some but not all middle situations in Yaqui.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

CLM	clause linkage marker	POT	potential
DIR	directional	RED	reduplication
DM	discourse marker	STA	stative
EMPH	emphatic	VBLZ	verbalizer
INT	intensifier		

All uncited data are taken from my field notes; examples from oral texts include the story title and page number of the digital manuscript. The examples are presented using a practical orthography accepted by the Yaqui community except for data quoted from grammatical studies, in which case the original orthography has been preserved (except accents) but the morphological glossing has been amplified or adjusted.

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Part VII

South America

Chapter 28

Reflexive and reciprocal constructions in Aguaruna

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This paper describes the grammatical means for expressing reflexive and reciprocal situations in Aguaruna (Chicham). The two functions are marked with dedicated verbal derivational suffixes which reduce the valency of the verb. There are some clear examples of lexicalized reflexive and reciprocal markers, with attendant semantic narrowing, but in general the semantic effects of these markers are predictable and combinatorial. Reflexive and reciprocal suffixes can co-occur with valency increasing derivational suffixes (causative and applicative) and are mutually exclusive with inflectional object agreement markers. Aguaruna is spoken between the Andes and the Amazon Basin, and its use of valency reducing derivations to mark reflexive and reciprocal situations is consistent with areal tendencies. However, the presence of distinct markers for reflexive and reciprocal makes Aguaruna more like the Andean Quechuan languages, as Amazonian languages tend to have a single multipurpose valency reducing derivation.

1 Introduction

This paper describes the grammatical means for expressing reflexive and reciprocal situations in Aguaruna, a Chicham language spoken in north Peru.¹ While the paper is largely descriptive in nature, it also aims to situate the description in the typological literature as much as possible.

¹I use the name *Aguaruna* when writing in English, as this is the most frequently encountered term. The language is officially named *awajún* in Peru, and native speakers I have worked with typically refer to it as *iinia chicham*. The ISO 639-3 code is agr, and glottocode agual253.



The Chicham family (formerly known as Jivaroan) consists of five closely related varieties, defined politically as distinct languages. In addition to Aguaruna, the other languages are Shuar, Wampis, Shiwiar, and Achuar. Aguaruna is the most distinct, at least from a phonological perspective, but speakers of all varieties are generally able to converse, although this may involve some initial difficulty in accommodating to differences.² All five languages are spoken in the south of Ecuador and north of Peru, in an area mostly within the Santiago, Pastaza and Marañón River basins (see Figure 1). This area is linguistically diverse, and in addition to Chicham languages there are populations speaking languages from other families (Quechuan, Kawapanan) as well as some isolates (Kandozi-Chapra). Linguistic diversity in the Marañón River basin appears to have been even higher at the time of the Spanish invasion (Adelaar & Muysken 2004: 172–173). Although this paper relates solely to Aguaruna, the facts are substantially the same for the other languages of the family.

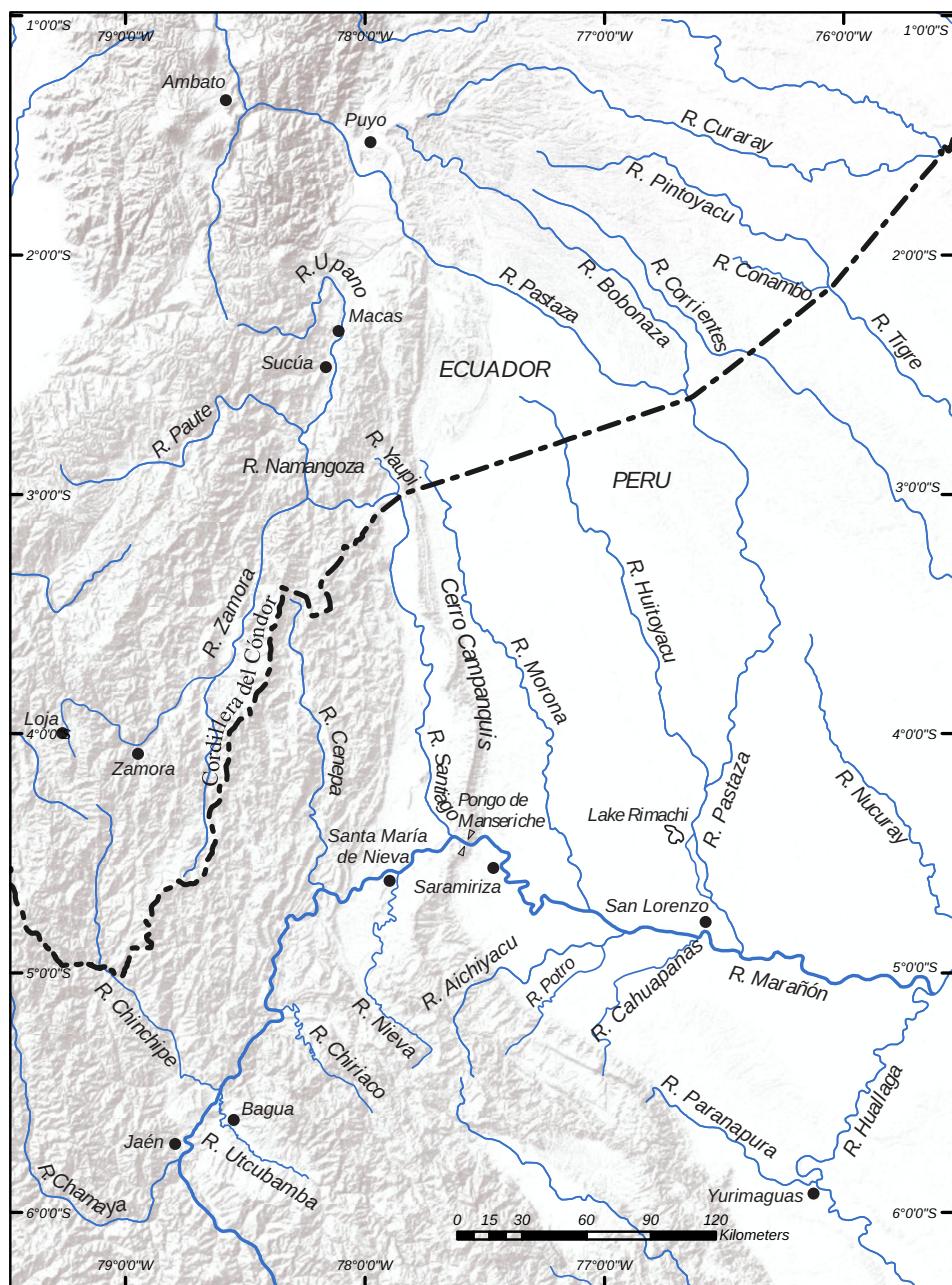
The description presented here is based on field data collected in various visits since 2004. Examples are cited in the same orthography used by Overall (2017), in which the following graphs differ from IPA values: <ch> = /tʃ/, <sh> = /ʃ/, <y> = /j/. Where examples are not taken from a published source, they are cited with the filename of the relevant recording; these recordings are currently being prepared for archiving. Examples are from recorded narratives except where otherwise specified. Original orthography is indicated by angle brackets.

The structure of the paper is as follows: §2 gives an overview of Aguaruna grammar. §3 describes the formal marking of reflexive and reciprocal constructions and their interaction with other categories, and §4 goes into more detail regarding the semantic range of reflexive and reciprocal. §5 discusses how Aguaruna fits into areal patterns, and §6 offers a brief conclusion.

2 Typological profile and grammar overview

Aguaruna is nominative-accusative, and typically shows SV/APV constituent order. The morphology is almost entirely suffixing, basically agglutinating, and shows both head and dependent marking: at the clause level, subjects and speech act participant (SAP) objects are indexed with verbal suffixes, and NP arguments are marked for case; and within the possessive NP, possessed nouns are morphologically marked as possessed, along with person and number of the possessor, and possessors are also marked (lexical nouns take a genitive form, pronominal

²See Overall & Kohlberger (in preparation), for a more detailed description of the Chicham family



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Figure 1: Map of Aguaruna

possessors take accusative case). Example (1) illustrates a possessive NP with lexical possessor. Note that there is no grammatical way to disambiguate 3rd person possessors (e.g. *she_i cut her_{i/j} hand*) – see §4.2 for examples.

- (1) *washí yakahí*
 [washi yaka-hí]_{NP}
 monkey.GEN arm-PSSD.3
 ‘the monkey’s arm’ [agr040723_29]

While the phonology is relatively straightforward, productive processes of vowel elision can obscure the agglutinating nature of the morphology. Vowel nasalinity is contrastive and spreads to adjacent vowels and glides, and the nasal consonants /m, n/ may be denasalized when followed by oral vowels (see Overall 2017: 67–71 for details).

2.1 Finite and non-finite verbs

Verbs are obligatorily inflected, and verbal morphology shows a clear distinction of finiteness. Finite verbs are marked for the following verbal grammatical categories: aspect, tense, person/number and mood/modality. Verbal morphology is entirely suffixing apart from an unproductive causative prefix, and can be usefully viewed in terms of morphological slots, as in the schematic overview in Table 1.

Table 1: Morphological slots in the verbal word

A	B	C	D	E	F	G	
ROOT	Valency	Object	Aspect	Negation	Tense	Subject	Mood

Table 2 shows the slot F suffixes that mark subjects in finite verbs. For 2nd and 3rd person, there is some allomorphy triggered by tense. The distinction between singular and plural number is only consistently maintained in 1st person; 3rd person does not distinguish number and the 2nd person “singular” form may also be found with plural reference, where number is irrelevant or apparent from the context. Note that plural subject can also optionally be specified along with aspect marking in slot C, independently of the person marking.

The categories of slots B to G are obligatorily specified, but not always overtly morphologically marked: in some slots, absence of a marker contrasts meaningfully with presence of a marker.

Table 2: Finite verbal subject markers

PERSON	TENSE	MARKER	
		SG	PL
1	all tenses	-ha	-hi
2	past tenses	-umi	-uhumi
	non-past tenses	-mi	-humi
3	present and definite future tenses		-wa
	other tenses	portmanteau tense	person markers

Aguaruna makes heavy use of non-finite clause types in clause-chaining constructions, especially in narrative texts. These clauses are morphosyntactically dependent in that they can only appear in a construction with an associated finite predicate: the verbs of dependent clauses are marked for most of the same categories as finite verbs, but lack tense and mood marking; they are also marked for switch-reference (same-subject versus different-subject, and some more specific relations). Nominalizations are also widely used, forming relative and complement clauses and also functioning in lieu of finite verbs in some contexts such as traditional narratives (Overall 2017: 537–540; and see detailed discussion in Overall 2018).

Reflexive and reciprocal markers are valency changing derivations and appear in slot A; they can appear in all verb forms, including subordinate verbs and nominalizations.

2.2 Grammatical relations and object marking in the verb

Aguaruna shows nominative-accusative alignment. This is manifested in case marking of NPs and verbal agreement, as well as grammatical processes such as nominalization and switch-reference, which distinguish subject (S or A) from non-subject (objects and obliques). For example, the non-subject nominalizer *-taĩ* forms a nominal that may refer to the notional object (*yu-taĩ* [eat-NMLZ] ‘food’), instrument (*auqa-taĩ* [write-NMLZ] ‘pen’) or location (*kanu-taĩ* [sleep-NMLZ] ‘dormitory’) (Overall 2017: 267). The objects of underived ditransitive clauses, as well as those added by valency increasing derivation, are also apparently identical to those of monotransitive clauses in their case marking, agreement, and syntactic behaviours such as nominalization and switch-reference (Overall 2017: 269).

Compare the 1SG object of an underived simple transitive clause in (2), recipient of the underived ditransitive clause in (3), and object of applicative derivation in (4), all of which are identically marked with accusative case and with verbal object agreement.

- (2) *mína huhuktá*
mi=na hu-hu-ki-ta
1SG=ACC carry-1SG.OBJ-PFV-IMP
'carry me!' (Overall 2017: 281)
- (3) *mína suhustá*
mi=na su-hu-sa-ta
1SG=ACC give-1SG.OBJ-PFV-IMP
'give it to me' (Overall 2017: 243)
- (4) *mína túhutmi*
mi=na tu-hu-tu-m^h
1SG=ACC say-APPL-1SG.OBJ-RECPST.3.DECL
'(she) told me' (Overall 2017: 304)

Verbs fall into two classes, manifested in the forms of the applicative suffix in slot A and the object marking suffixes in slot B, which show initial /h/ or /t/ depending on the class of the verb. The applicative suffix has the form *-hu* or *-tu*, and the 1st person singular object suffix has the same form – but where applicative and 1st person singular object co-occur, they alternate *h/t* forms (as in 4 above). The 2nd person object suffix has the basic forms *-hama* or *-tama*, with a variant *-pa* that seems to be phonologically conditioned (Overall 2017: 244). 1st person plural object is generally marked identically to 2nd person, except that the form *-kahatu* can be used where 2nd person is specifically excluded, and is also used to mark generic human objects. Only SAP objects are indexed with verbal suffixes – 3rd person objects are always zero-marked. There is no difference in verbal indexing of notional direct, indirect or derived objects, but only one object can be indexed on the verb. Overall (2017: 275) shows that speakers avoid grammatical configurations that trigger competition for this marking slot, that is, clauses that include two SAP objects. Object marking is obligatory, and may co-occur with overt object NPs, as in (2–4) above. Examples (5–6) illustrate simple SAP object marking, and (7) shows a SAP object added by the applicative derivation.

- (5) *ūyūntusta*

ūyuna-tu-sa-ta
accompany-1SG.OBJ-PFV-IMP
'go with me!' [agr040721_07]

- (6) *áu waipákmi*

au wai-pa-ka-mi
DEM.DIST see-2.OBJ-PFV-RECPST.3.DECL
's/he saw you' (Overall 2017: 314)

- (7) *pasún miníthamkūish*

pasun mini-tu-hama-ku-ĩ=sha
evil.spirit arrive-APPL-2.OBJ.IPFV-SIM-DS=CONCES
'even though an evil spirit arrives to your detriment' [agr041005_21]

The combination of 1st person A and 2nd person P does not involve object marking in slot B (Object), instead it is marked in slot F (Subject) with the suffix *-hami* if both arguments are singular (as in 8) or *-himi* if either or both of the arguments is plural. Although these forms are clearly based on 1st person markers *-ha* [SG]/*-hi* [PL] + 2nd person *-mi*, their non-combinatorial semantics with respect to number leads Overall (2017: 244–245) to treat them as portmanteau morphs.

- (8) *kami yabái wíshakam dikáhuahami*

kami yabai wi=shakama dika-hu-a-hami
indeed now 1SG=ADD know-APPL-PFV-1SG.SBJ/2SG.OBJ.DECL
'now I know that about you too' [agr041005_21]

Two productive valency-increasing operations are marked with suffixes in slot A (valency): these are applicative *-hu/-tu* and causative *-mitika*. Both operations increase the valency of the verb by one, adding an object to the clause. Applicative derivation straightforwardly adds an object argument, semantically typically a beneficiary (as is the added [1SG] object in 9) or maleficiary (as in 7 above). In the case of a causative, there is a rearrangement of roles from the underived clause, as the added "causer" argument is the subject and the notional subject of the causativized verb becomes an object ("causee"), (10).

- (9) *minásh batái ukuithúkta*

mi=na=sha batai ukui-tu-hu-ka-ta
1SG=ACC=ADD chambira detach-APPL-1SG.OBJ-PFV-IMP
'get some chambira (fruit species) for me too!' (Overall 2017: 302)

- (10) *ámi mína dushímthami*
ami mi=na dushi-mitika-ha-mi
2SG 1SG=ACC laugh-CAUS-1SG.OBJ.IPFV-2SG.DECL
'you are making me laugh' (Overall 2017: 300)

A set of verbs form causatives not with the slot A (valency) suffix but with a prefixed vowel whose quality is not completely predictable: *i-tsiki-* [CAUS-jump-] 'startle'; *i-ta-* [CAUS-arrive-] 'bring'.

A few verb roots show unproductive phonological alternants with differing transitivity values. In general, the intransitive variant is the more marked member of such pairs, for example *shiki-* 'urinate on (transitive)', *shiki-pa-* 'urinate (intransitive)', with unproductive detransitivizer *-pa*.

Reflexive and reciprocal markers are the only productive valency reducing operators, and their formal properties form the topic of the following section.

3 Reflexive and reciprocal marking in the verb

Reflexive and reciprocal constructions encode situations in which there is coreference between two semantic participants. Reflexive applies to verb roots that typically appear in transitive clauses and signals coreferentiality of the notional A and P arguments. Reciprocal marking similarly signals coreference of A and P arguments, but they are acting on each other rather than on themselves. The reciprocal construction therefore implies two or more participants, at least semantically.

In Aguaruna, both reflexive and reciprocal derivations are marked with verbal suffixes in slot A (Figure 1): reflexive *-m(a)* or *-mam(a)*; and reciprocal *-n(a)i*, with denasalized form *-d(a)i*.³

At first glance, these markers appear to function as members of the object-marking paradigm. Like object markers, reflexive and reciprocal are obligatory whenever there is an appropriate configuration of subject and object. In the examples in (11), the SAP object markers in (11a–11b) appear to form a paradigm with the reflexive marker in (11c). Similarly, compare the verb marked with the reciprocal suffix in (12) with the same verb marked for 2nd person object in (6) above – both the reciprocal and the object suffix appear directly following the root and preceding the aspect marker.

³The bracketed vowels are elided in phonologically predictable environments. The selection of *-ma* or *-mama* appears to be lexically conditioned.

- (11) a. *áu tsupíŋkamĩ*
 au tsupi-hu-ka-mĩ
 DEM.DIST cut-1SG.OBJ-PFV-RECPST.3.DECL
 's/he cut me' (Overall 2017: 247)
- b. *tsupíŋmakmĩ*
 tsupi-hama-ka-mĩ
 cut-2.OBJ-PFV-RECPST.3.DECL
 'he has cut you' (Overall 2017: 307)
- c. *tsupímakmĩ*
 tsupi-ma-ka-mĩ
 cut-REFL-PFV-RECPST.3.DECL
 'he has cut himself' (Overall 2017: 307)
- (12) *āhúm wainiámi*
 āhum wai-nai-a-mi
 later see-RECP-PFV-HORT
 'let's meet (i.e. see each other) later' (Overall 2017: 424)

But Overall (2017: 306) points out that reflexive and reciprocal markers are not compatible with overt object NPs. This indicates that they are in fact valency reducing and can be considered to constitute reflexive voice and reciprocal voice, respectively (in the sense of Kulikov 2011; and see Haspelmath 2023: §5.2–§5.3 [this volume]). In contrast, the object markers are compatible with overt NPs (13–14) and are therefore more like agreement. Outside of elicitation contexts, overt pronouns are more likely to appear in emphatic contexts such as (15), where the pronominal object NP is separated from the verb by the multi-word subject NP.

- (13) *mína isátni*
 mi=na isa-tu-ini-i
 1SG=ACC bite-1SG.OBJ-PFV-3.DECL
 'it bit me' (Overall 2017: 293)
- (14) *mína suhustá*
 mi=na su-hu-sa-ta
 1SG=ACC give-1SG.OBJ-PFV-IMP
 'give it to me' (Overall 2017: 243)
- (15) *amina apahui tuki puhuwa nuu yaimpakti*
 ami=na [apahui tuki puhu-wa nu] yaĩ-pa-ka-ti
 2SG=ACC God always live-3 ANA help-2.OBJ-PFV-JUSS
 'may God, who is eternal, help you' (personal correspondence)

There is no reflexive or reciprocal pronoun, and indeed the valency-reducing nature of these constructions means that there would be no function for such a pronoun, since it would be expected to occupy the object role.⁴

As noted above, overt pronouns are used in emphatic contexts. Example (16)⁴ illustrates such a context with a reflexive marked verb: a man (subject of the final nominalized verb *wainkau* ‘saw’) discovers that his younger brother is turning into a monster and eating himself. The verb ‘eat’ is marked with the reflexive suffix, and the unexpected nature of this situation is signaled by representing the subject with an overt pronoun marked with the enclitic =ki (glossed ‘restrictive’ following Overall 2017, and indicating exhaustive focus). Note that a bilingual speaker translated this into Spanish with the emphatic reflexive *sí mismo*.

- (16) *níŋki yúmamak puhúttaman wainkáu*
[nĩ=ki yu-mama-a-kũ puhu-tatamana] waina-ka-u
3SG=RESTR eat-REFL-IPFV-SIM.3.ss live-SBJ>OBJ see-PFV-NMLZ
'he_i saw that he_j was eating himself' [agr040720_22]

While their interaction with the object marking paradigm and their obligatoriness make reflexive and reciprocal markers appear more like traditional inflection, they also show properties that align them with traditional derivation. In particular, some stems are lexicalized and show non-combinatorial semantics. Lexicalized reflexives include *su-ma-* [give-REFL-] ‘buy’ (not ‘give to oneself’; but cf. reciprocal ‘give to each other’ in 30 below); and *wai-ma-* [see-REFL-] ‘see a vision under the influence of hallucinogens’. In order to express the meaning ‘see oneself’, a different verb root *nii-* ‘look at’ is used: *nii-ma-* [look.at-REFL-] ‘look at oneself’.⁵

Lexicalized reciprocal forms include *iŋki-ni-* ‘hold hands’ < *iŋki-* ‘put away, keep safe, load gun’; and *maa-ni-* [kill-RECP-] ‘fight’.⁶ In order to express the sense ‘kill each other’, one can use a different verb, such as *amu-* ‘finish off’ – this verb can refer to finishing up a serving of food or drink, or to exterminating a group of people. Its reciprocal marked form appears in the place name *wiqa amuníkbau* (17), the site of a historic battle with many casualties.

⁴The final verb is nominalized and functioning as a finite verb, a frequent construction in traditional narratives (cf. §2.1). The auxiliary verb ‘live’ in the bracketed clause is marked for switch-reference indicating that its subject is coreferent with the object of the final verb (see Overall 2017: §13.6).

⁵Yanua Atamain, personal communication and Eduardo Cungumas, personal communication.

⁶The verb ‘kill’ shows some variation, surfacing as /ma/, /maa/, or /mã/ (cf. 18) depending on its morphological context.

- (17) *wiqa amunikbau*
 wiqa amu-nai-ka-mau
 ancestor finish.off-RECP-PFV-NMLZ
 ‘place of the ancestors killing each other’ [agr041005_18]

In sum, although I have labelled reflexive and reciprocal as derivational markers (cf. Haspelmath 2023: §5.2 [this volume]), I note that “the traditional division into derivational and inflectional morphology is not a very useful one for Aguaruna verbs” (cf. Plungian 2001; Overall 2017: 233).

3.1 Applicative and reflexive verbal markers

Reflexive and reciprocal markers can co-occur with the applicative suffix, which they may precede or follow, depending on the semantics. The lexicalized reflexive and reciprocal verb stems, with non-combinatorial semantics, are treated like underived roots in having the applicative derivation added to them. The verb root *iki-* ‘move something into another position’, ‘put’ has a lexicalized reflexive form *iki-ma-* [put-REFL-] with the specific meaning ‘sit down’. This stem may then take the applicative suffix *iki-ma-tu-* [put-REFL-APPL-] giving the meaning ‘sit on something’ (Overall 2017: 308–309). On the other hand, reflexive and reciprocal markers can occupy the morphological slot immediately following the applicative suffix, marking the notional object of the applicative and giving a self-benefactive construction, as in (18)⁷ where the applicativized stem *mā-tu-* [kill-APPL-] ‘kill for someone’ is reflexivized to give the sense ‘kill for oneself’; similarly in (19).

- (18) *wikaiuqák wiuwai kuntínun*
 wikaiuqa-kū wi-u=ai [kuntinu=na
 walk.IPFV-SIM.3.ss go.PFV-NMLZ=COP.3.DECL animal=ACC
mantumaátatus
mā-tu-ma-a-tatus]
 kill-APPL-REFL-PFV-INTENT.3.ss
 ‘he went walking to kill animals for himself’ (i.e. ‘he went hunting’)
 (Overall 2017: 492)

⁷Note that the main verb in this example ('he went') is nominalized and formally marked as the complement of the copula enclitic (see detailed discussion of this construction in Overall 2018).

- (19) *yúpichu huhumtáyami*
yupichu hu-hu-ma-tayami
easy take-APPL-REFL-NORM
'we easily take it away (for ourselves)' (Overall 2017: 617)

Similar examples can be found for reciprocal marking. The non-combinatorial stem *maa-ni-* [kill-RECP-] 'fight' (not 'kill each other'), can be applicativized to give *maa-ni-tu-* [kill-RECP-APPL-] 'fight for something'. On the other hand, the verb root *kanu-* 'sleep' can be applicativized to give a stem meaning 'reach the same spirit power as someone by having the same dream', and this stem in turn can take a reciprocal marker following the applicative suffix: *kanu-tu-dai-* [sleep-APPL-RECP-] 'reach the same spirit power as each other'.

3.2 Reciprocal and plurality

Although a reciprocal situation must involve multiple participants semantically, these are not necessarily encoded as plural subjects. Overall (2017) gives the following elicited example (20) of the derived verb stem *maa-ni-* [kill-RECP-] 'fight'. Although there is semantically more than one participant, the verb is marked for 1st person singular subject, and no other participant is mentioned.

- (20) *kashín wíi maániktathai*
kashini wi maa-nai-ka-tata-ha-i
tomorrow 1SG kill-RECP-PFV-FUT-1SG-DECL
'tomorrow I'm going to fight' (Overall 2017: 311)

There is no direct NP coordination in Aguaruna, instead the comitative enclitic =*hai* may be used to express plural participants. NPs marked with this enclitic may be treated as conjoined or simply oblique; that is, [NP_{SUBJECT} NP=*hai*] may trigger singular or plural subject marking. Example (20) can be read as having an implied second participant treated as an oblique NP and therefore not reflected in the verb inflection.

The narrative passage in (21) illustrates this use of comitative =*hai*, combined with the indeterminacy of number marking. The subordinate verbs are marked simply for 3rd person subject, unspecified for number. The woman was the subject of the previous clause and is the implied subject here; the husband must be interpreted as a semantic participant but it remains ambiguous as to whether he is treated as a syntactic subject.

- (21) *aíshihā̃* *maá* *maániakū̃* *nuwanú̃*
 [aishī=hã] maa maa-nai-a-kawā̃] nuwanu=̃
 husband.PSSD.3=COM REDUP kill-RECP-IPFV-REPET.3.SS ANA=LOC
chicháman *ipíŋkā* *huwáku* *túwahami*
 [chichama=na ipin̄ki-kā] huwa-ka-u tuwahami
 problem=ACC resolve-PFV.3.ss stay-PFV-NMLZ NARR
 '(the woman) fighting with her husband, they then resolved their
 problems, so the story goes' (Overall 2017: 311)

4 Semantics of reflexive constructions

The previous section has described the details of formal marking of reflexive and reciprocal constructions. As shown above, the reflexive and reciprocal suffixes interact with a paradigm of object markers on the verb, clearly distinguishing situations in which the notional subject and object are coreferent from those in which they are not. At the level of the clause, these constructions reduce valency, making the appearance of an object NP impossible. This section goes into more detail regarding the semantic effects of the reflexive and reciprocal constructions in Aguaruna.

4.1 Extroverted and introverted verb types

Extroverted verbs describe actions that prototypically apply to a second participant, while introverted verbs are those that describe prototypically self-directed actions (Haiman 1983: 803). There is no evidence that the Aguaruna reflexive or reciprocal constructions behave differently in their morphology or syntax with different semantic classes of verbs, but a few examples of verbs with inherently reflexive semantics but no overt reflexive marking are all of the introverted semantic type, as predicted by Haiman (1983).

The extroverted verb type was illustrated with the verb *tsupi-* ‘cut’ in (11a–11c) in §3 above. Similarly, *itti-* ‘beat with nettle’ (? <*itti* ‘wasp’), forms the reflexive as *itti-ma-* [beat.with.nettle-REFL-] ‘beat oneself with nettle’. The extroverted verb *ma-* ‘kill’ is illustrated in (22).

- (22) *áñĩ* *dakáka* *maámi*
 au=̃ daka-ka ma-a-mi
 DEM.DIST=LOC wait-PFV.1PL.SS kill-PFV-HORT
 ‘let’s ambush him there and kill him!’ [agr041005_19]

Adding reflexive gives the sense ‘kill oneself’ (Uwarai Yagkug et al. 1998: 76 translate the stem *maa-ma-* [kill-REFL-] into Spanish as *suicidarse* ‘commit suicide’). Example (23), from a translation of the New Testament, relates how a jailer had drawn his sword to kill himself after thinking that the people he was guarding had escaped.⁸

- (23) <*Nunitai Pablo senchi untsuká: -Maamawaipa, jutiik nuni-taĩ Pablo sînchi untsu-kã maa-ma-aw-aipa hutii=ka do.that-3.ds Paul strongly call-PFV.3.ss kill-REFL-PFV-PROH 1PL=TOP ashí betek batsatji, -tiuwai.*>
ashi bitika batsata-hi ti-u=ai all full be.PL.IPFV-1PL say.PFV-NMLZ=COP.3.DECL
‘when he did that, Paul called out loudly, “don’t kill yourself! we are all here!” he said.’ (La Liga Bíblica 2008: 245)

The introverted verb type can be illustrated with the verb *ayamhu-* ‘defend’. Example (24) shows a simple transitive use of this verb; in (25) it is marked with 1st person singular object; and in (26)⁹ it is reflexivized to give ‘defend oneself’.

- (24) *makishkish ayamhúkchahui*
makichiki=sha ayamhu-ka-cha-aha-u=i
one=ADD defend-PFV-NEG-PL-NMLZ=COP.3.DECL
‘not even one defended him’ (Overall 2017: 195)
- (25) “*ikámŷâwâ tukúhui, ayamhútakata!*”
[ikama_yawaã tuku-hu-a-wa-i ayamhu-tu-ka-ta
jaguar attack-1SG.OBJ-IPFV-3-DECL defend-1SG.OBJ-PFV-IMP
tus untsúmu
tus] unsuma-u
say.SBD.3.ss call.IPFV-NMLZ
“‘A jaguar is attacking me! Help me!’ he was calling’ (Overall 2017: 561)
- (26) *yuwáta tâma nuní áyamhumak...*
[yu-a-ta-ha ta-ma] nuni ayamhu-ma-kã
eat-PFV-IFUT-1SG say.IPFV-NSBJ>SBJ thus defend-REFL-PFV.3.ss
‘when (the puma) tried to eat him, he defended himself like that..’ lit.
when (the puma) said “I will eat him!”... (Overall 2017: 565)

⁸The relevant passage is Acts 16:28, translated in the *New International Version* as: “But Paul shouted, ‘Don’t harm yourself! We are all here!’”.

⁹Note that the verb ‘say’ in the bracketed clause is marked for switch-reference indicating that a non-subject participant (the object, in this example) is the subject of the controlling clause (see Overall 2017: §13.6).

Verbs of grooming fall into the introverted semantic class and are typically reflexivized, with the unmarked root being transitive. For example, *timashi-* ‘comb someone’s hair’, *timash-ma-* [comb.hair-REFL-] ‘comb one’s own hair’, as shown in (27).

- (27) *wíi timáshmahai*
 wi *timashi-ma-ha-i*
 1SG comb-REFL.IPFV-1SG-DECL
 ‘I am combing my hair’ (cf. Overall 2017: 306)

The verb *ikinj-ma-* ‘wash one’s hands’ is also reflexive, the stem *ikihu-* means ‘wash someone’s hands’.¹⁰ These verbs treat the person being groomed as the object, not the specific affected body part (i.e. ‘hair’ and ‘hands’ in these examples are encoded as part of the verbal semantics and not treated as participants).

Although most introverted actions are expressed with reflexivized verbs, there are also some underived verbs of this type, as predicted by Haiman (1983: 803–808). For example, the verb *niha-* ‘wash (clothes etc.)’ is not reflexivized to describe people washing themselves, instead there is an underived intransitive verb *maa-* ‘bathe’. This verb can in turn be causativized to give *i-ma-* [CAUS-bathe-] ‘bathe someone (such as a child)’.

Verbs describing inherently reciprocal actions tend to be basically transitive and take reciprocal marking: *iŋku-ni-* [meet-RECP-] ‘meet each other’, *kumpam-dai-* ‘greet each other’,¹¹ in addition to *maa-ni-* [kill-RECP-] ‘fight’ already mentioned above.

4.2 Exact and partial coreferences

I have not encountered any clear examples of the contrast between exact and inclusive coreference of the type that would distinguish *he defended himself* from *he defended [himself and others]*. The comitative marker described in §3.2 above would presumably allow such non-exact coreference to be encoded with the standard reflexive construction.

With respect to actions directed at body parts, the examples of grooming verbs given above (§4.1) illustrate a strategy of lexicalizing the action as a transitive verb with the possessor of the body part (not the body part itself) as object. These

¹⁰This stem may include the causative prefix *V-*, and is perhaps related to semantically similar verbs *kita-* ‘drip’, *kitama-* ‘be thirsty’, *kiha-* ‘absorb liquid nasally’. It may also include the applicative suffix *-hu*.

¹¹The /kumpa/ element is from Spanish *compadre* ‘close friend’.

introverted verbs can be reflexivized with the standard reflexive construction (as in 27 above). With extroverted verbs directed at body parts, however, the body part itself is the grammatical object, heading its own NP. Compare example (28), in which the subject of the verb *hu-* ‘take’ is the possessor of the object, the possessed noun *katī* ‘his penis’, and example (29), in which the subject of the same verb *hu-* ‘take’ is different from the possessor of the object NP headed by the possessed noun *bakui-chi-hī* [thigh.PSSD-DIM-PSSD.3] ‘his little thigh’. As noted in §2 above, there is no way to disambiguate 3rd person possessors (‘his’ vs ‘his own’) other than by adding a lexical possessor NP: the same suffix *-hī* (-PSSD.3) is used in the situation of coreference in (28), and in disjoint reference in (29). As can be seen in (28), the reflexive construction is not used when the object is a body-part of the subject.

- (28) *katīn uwihín húkī*
katī=na uwī-hī=nī hu-kī
penis.PSSD.3=ACC hand-PSSD.3=LOC take-PFV.3.ss
‘[the devil] having taken his (own) penis in his hand...’ [agr040723_29]
- (29) *núna yachiuchihin bakuichihin*
nu=na yachi-uchi-hī=na baku-chi-hī=na
ANA=ACC brother.PSSD-DIM-PSSD.3=ACC thigh.PSSD-DIM-PSSD.3=ACC
hukiuwai
hu-ki-u=ai
take-PFV-NMLZ=COP.3.DECL
‘he took his little brother’s little thigh’ [agr041005_14]

4.3 Coreference of the subject with various semantic roles

Examples thus far have illustrated verbs whose objects are semantically patients or themes, and these are the targets of reflexive marking. When combined with applicative derivation, reflexive targets a beneficiary or maleficiary as a grammatical object, as described above (§3.1, examples 18–19).

The underived ditransitive verb *su-* ‘give’ has a gift and a recipient object, the latter of which is more likely to be human and therefore potentially coreferent with the subject. There is a semantic change when this verb combines with reflexive, giving the stem *su-ma-* [give-REFL-] ‘buy’, not ‘give to oneself’. With reciprocal, however, the meaning is compositional *su-nai-* [give-RECP-] ‘give to each other’, as in (30).

- (30) *nuwanúi sudáisauwai*
 nuwanu=í su-nai-sa-u=ai
 ANA=LOC give-RECP-PFV-NMLZ=COP.3.DECL
 ‘then they gave each other (their songs)’ [agr041005_17]

Note that the reflexivized stem *su-ma-* [give-REFL-] ‘buy’ has a self-benefactive reading (i.e. ‘buy for oneself’). To express the notion of buying for someone else, the applicative suffix can be added, as in (31).

- (31) *wíi haánchin sumáŋkathami*
 wi haanchi=na su-ma-hu-ka-ta-hami
 1SG clothes=ACC give-REFL-APPL-PFV-IFUT-1SG.SBJ/2SG.OBJ.DECL
 ‘I will buy you clothes’ (Overall 2017: 309)

The verb *tu-* ‘say’ takes a speech report complement and may also take an object referring to the addressee, or to a person being spoken about. The latter type of object is the target of reflexive in (32).

- (32) *atákik tumámipa*
 ataki=ka tu-mami-ipa
 again=TOP say-REFL.PFV-PROH
 ‘don’t say that about yourself again’ [agr041005_22]

It seems clear, then, that any grammatical object is a potential target of reflexivization, regardless of the semantic role it encodes.

4.4 Long-distance coreference

Where coreference involves an argument in a subordinate clause whose antecedent is in a matrix clause, there may be the possibility of ambiguity of the type seen in English (33), and reflexive marking may be used to disambiguate in the case of coreference.

- (33) *She_i thought that she_{i/j} had enough money.*

In Aguaruna, reflexive is not used in such constructions, and in fact there is no chance of ambiguity as subordinate clauses are not finite, and are marked for switch-reference. The nearest construction to a finite subordinate clause is the speech report construction, which is used not only to report direct speech but also for complements of thought, intention and purpose. Because speech reports are always direct speech, there is no chance of the ambiguity seen in (33), as the equivalent would look like (34) or (35).

(34) *She_i thought saying “she_j has enough money.”*

(35) *She_i thought saying “I_i have enough money.”*

The following text examples illustrate coreference and disjoint reference in subjects of subordinate clauses formed with speech reports. In (36) the subject of the matrix clause is the same as that of the apprehensive clause, and since this is a direct speech report it is expressed as 1st person singular. In (37) the subject of the verb in the speech report is different from that of the matrix clause, consequently it is expressed as 3rd person.

(36) *áimak imamkimas “intáhairj” tus*
 aima-a-kū imamkima-sā [inta-ha-i-ha say.SBD.3.ss]
 fill-IPFV-SIM.3.ss take.care-SBD.3.ss break-PFV-APPR-1SG
‘filling them carefully, lest he should break them’ lit. saying “may I not
break them” (Overall 2017: 363)

(37) *iwíyahi “tipistí” tusá*
 iwi-ya-hi [tipi-sa-ti tu-sa]
 raise.hand-REMPST-1PL.DECL lie.down-PFV-JUSS say-SBD.1PL.SS
‘we raised our hands saying “may it stop!”’ (Overall 2017: 350)

5 Areal tendencies

Reflexive and reciprocal are valency-reducing derivations in Aguaruna, and this is in keeping with a common pattern in Amazonian languages, but Aguaruna lacks the vagueness that characterizes the detransitivizers of other languages, for example Derbyshire (1999: 44) describes a verbal detransitivizing derivation in most Carib languages “which is added to a transitive stem and carries the meanings of ‘reflexive’ or ‘reciprocal’, or simply ‘intransitive’ which is often best translated as a passive in languages like English”. Similarly: “A number of [Tupi] languages have a general intransitivizing prefix, which covers reflexive, reciprocal and passive” (Rodrigues 1999: 120). Summarizing this trend, Payne (2001: 596) suggests a general detransitivizing affix as an areal feature of Amazonian languages. Aguaruna is only partially in keeping with this trend, as its reflexive and reciprocal markers are detransitivizing verbal derivations, but their semantically specific nature means that they do not follow the tendency towards a single semantically vague detransitivizing derivation. In this, Aguaruna is more akin to the Quechuan languages spoken to the west, which have a range of semantically specific valency changing derivations including reflexive and reciprocal, as well

as valency increasing causative and applicative (Adelaar & Muysken 2004: 229). Overall (2017: 31–32) has observed that Aguaruna grammar shows features of both Amazonian and Andean types, as is to be expected given its location in the foothills of the Andes at the western edge of the Amazon basin.

6 Conclusions

This paper has described the processes of reflexive and reciprocal marking in Aguaruna grammar. The most notable point is that the markers of these functions straddle the divide between traditional notions of derivation and inflection. They reduce the valency of the verb, but they are obligatory and form a paradigm with inflectional categories of participant agreement. The function of reducing valency, rather than marking reflexivity within a syntactically transitive clause, is consistent with patterns found in neighbouring Quechuan languages (mentioned in §5) and in the wider Amazonian area (Birchall 2014: 187).

There are some clear examples of lexicalized reflexive and reciprocal markers, with attendant semantic narrowing, but these are the exception. For the most part, the semantic effects of these markers are predictable and combinatorial, and this is more like Quechuan languages, in contrast to the Amazonian tendency towards a single, semantically indeterminate, valency reducing derivation.

The description presented above is largely based on textual examples. Future research focusing on elicitation will no doubt help to tease out more details of the subtleties of reflexive and reciprocal marking in Aguaruna.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ADD	additive	NORM	normative
ANA	anaphoric pronoun	NSBJ	non-subject
APPR	apprehensive	PSSD	possessed form of noun
CNTR.EX	counter expectation	RECPST	recent past
CONCES	concessive	REDUP	reduplication
DIM	diminutive	REMPST	remote past
DS	different subject	REPET	repetitive
EP	epenthetic segment	RESTR	restrictive
HORT	hortative	SAP	speech act participant
IDEO	ideophone	SBD	subordinate
IFUT	immediate future	SIM	simultaneous
INTENT	intentional	SR	switch-reference
JUSS	jussive	SS	same subject
NARR	narrative modality		

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Chapter 29

Reflexive constructions in Kakataibo

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The present paper presents a discussion of reflexive constructions in Kakataibo, a Pano language spoken in Peruvian Amazonia. The language exhibits a productive verbal reflexive, which is mainly used on transitive verbs, as well as a middle marker which is also used to express reflexive meanings. Kakataibo emphatic pronouns and the noun *nami* ‘body’ can also participate in reflexive constructions, but require additional indicators of co-referentiality: emphatic pronouns require the presence of the verbal reflexive marker, whereas the noun *nami* ‘body’ needs a possessive marker and an emphatic clitic. Their need for extra markers of coreference suggests that neither emphatic pronouns nor the noun *nami* ‘body’ are fully grammatical reflexive nominals.

1 Introduction

The present paper presents a discussion of reflexive constructions in Kakataibo, a Pano language spoken in Peruvian Amazonia. Following Haspelmath (2023 [this volume])’s definition of reflexive constructions, I discuss here all the Kakataibo constructions that satisfy the two main criteria listed in (1) (taken from Haspelmath 2023 [this volume]).

(1) Reflexive construction

A reflexive construction is a grammatical construction

- (i) that can only be used when two argument positions of a clause require coreference,
- (ii) and that contains a special form (a reflexivizer) that signals this coreference.



The criteria stipulated in (1) are satisfied in Kakataibo by constructions with a reflexive verbal marker. Some constructions featuring emphatic pronouns or the noun *nami* ‘body’ also fit the definition in (1), under the condition that they also carry a verbal reflexive marker. Reflexive voice markers include the reflexive marker and the middle marker (see Zariquiey 2018: 306–309). The reflexive voice marker is a truly derivational verbal suffix (with a rich morphophonology), whereas the middle marker is used in some cases as a derivative marker, while in other instances it is part of what Valenzuela (2017: 416–417) calls “alternative derivation” (pairs of transitive-intransitive verbs obtained from bound roots which lack a transitive category and can never be used in discourse by themselves; see §3.2 for some illustration of this).

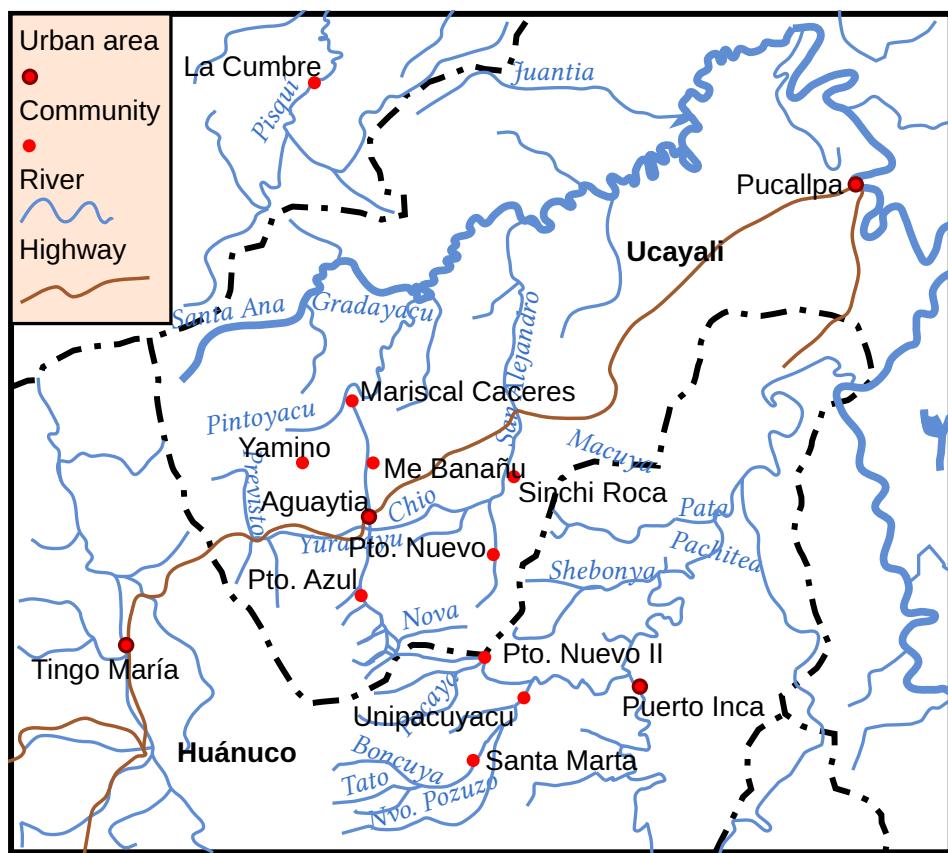
This chapter is structured as follows. In §2, I present some background information on the Kakataibo language and its speakers. The verbal markers that express reflexive meanings are discussed in §3 (§3.1 illustrates the reflexive marker and §3.2 discusses the middle marker). The reflexive constructions with emphatic pronouns and the noun *nami* ‘body’ are presented in §4.1 and in §4.2, respectively. Finally, some conclusions are listed in §5.

2 The Kakataibo language and its speakers

Kakataibo is a Pano language spoken by approximately 3000–3500 people in the Peruvian departments of Huánuco and Ucayali. The Kakataibo people live along the Aguaytía, San Alejandro, Shamboyacu, Sungaroyacu and, more recently, Pisqui Rivers (see Figure 1), where the language remains vital and is learnt by children despite intense contact with Spanish.

Kakataibo is the westernmost Pano language and, within the language family, Kakataibo is the only member of its branch (Shell 1965; d’Ans 1973; Loos 1999; and Fleck 2013). As described in Zariquiey (2011), there are four extant Kakataibo dialects, spoken in the Lower Aguaytía, Upper Aguaytía, Sungaroyacu and San Alejandro Rivers, respectively. “Nokamán”, a variety named and minimally documented by Tessmann (1930), was a fifth dialect of the language, now extinct (Zariquiey 2013). The Lower Aguaytía variety is the one studied in this paper (for a full grammar of this dialect, see Zariquiey 2018). This dialect exhibits the phonological inventory given in Tables 1 and 2 (the orthographic conventions followed in this paper are given in angle brackets if different from IPA).

Kakataibo is an agglutinative language with scarce instances of fusion. Verbal morphology is far more complex than nominal morphology and verbal forms



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Figure 1: Location of major Kakataibo settlements (based on Zariquiey 2018)

Table 1: Kakataibo consonant inventory

	Labial	Alveolar	Post-alveolar	Retroflex	Palatal	Velar	Glottal
Stop	p	t				k, kʷ <ku>	? <‘>
Affricate		ts	tʃ <ch>				
Fricative		s	ʃ <sh>	ʂ <x>			
Nasal	m	n			j̪ <ñ>		
Liquid		r <r>					
Approximant	β 						

Table 2: Kakataibo vowel inventory

	Front	Central	Back
High	i	i <ë>	u
Mid	e		o
Low		a	

may include a large number of affixes (see 2), although the average number of suffixes per verbal root in natural speech is only 1.64 (see Zariquiey 2018: 150).¹

- (2) *Pimibëtsintëkënkankëxa.*

pi-mi-bëtsin-tëkën-kan-akë-x-a
eat-CAUS-coming:TR-again-PL-REM.PST-3-NON.PROX

‘While coming, they made (someone) eat again a long time ago.’

The language exhibits a complex alignment system that combines ergative and tripartite case marking with accusative subject cross-referencing both on verbs and second position enclitics. Clausal constituent order is pragmatically determined, but there is a tendency towards verb-final sentences. Word order in the noun phrase is not fixed and most nominal modifiers can appear either before or after the nominal head. The language also exhibits a rich switch-reference system and a pervasive use of nominalizations in discourse.

In this chapter, I assume a very basic distinction between transitivity and valence in Kakataibo. In Kakataibo, transitivity is a lexical property of verbs, and two lexical transitivity classes can be distinguished in the language: intransitive and transitive. The transitivity class of the verb is encoded in various parts of the sentence, by means of various transitivity agreement and transitivity harmony phenomena. Therefore, it is always obvious if a verb is lexically transitive or intransitive. This is illustrated in the following examples. In (3), which features the predicate *pi* ‘eat’, the pronominal subject bears the A-enclitic =*n*, the switch-reference marker takes the form -*xun* ‘subject > A, simultaneous event’ and the associated motion suffix is -*bëtsin* ‘coming’, which exclusively appear with transitive verbs. In turn, in (4), which features the verb *tan* ‘rest’, we find the S-enclitic =*x* on the pronominal subject, as well as the switch-reference marker -*ax* ‘subject > s, simultaneous event’ and the associated motion suffix -*kuantsin* ‘coming’,

¹The examples included in this paper come both from elicitation and texts. Some of the examples have been adapted from Zariquiey (2018: 308).

which exclusively appear with intransitive verbs. All Kakataibo transitive verbs behave like *pi* ‘eat’ and all Kakataibo intransitive verbs behave like *tan* ‘rest’.

- (3) *kuan-xun kana ‘ë=n atsa pi-bëtsin-i-n*
 go-SBJ>A:SE NAR:1SG 1SG=A manioc eat-coming:TR-IPFV-1/2
 ‘Having gone, I am eating manioc while coming.’
- (4) *kuan-ax kana ‘ë=x tan-kuantsin-i-n*
 go-SBJ>S:SE NAR:1SG 1SG=S rest-coming:INTR-IPFV-1/2
 ‘Having gone, I am resting while coming.’

I understand valence, in turn, as the number of arguments with which a verb is used in a specific construction (following, for example, Dixon & Aikhenvald 2000: 3). Although there are strong cross-linguistic associations between transitivity and valence (e.g., transitive verbs have a valence of at least two, whereas verbs with one argument are intransitive), in Kakataibo, the transitivity category of a verb cannot be predicted 100% of the time based on its valence (see Zariquiey 2017, 2018: 276–290). This mainly relates to the existence in Kakataibo of a small set of bivalent intransitive predicates, whose non-subject arguments (which are called “quasi-objects” in Zariquiey 2017) are reminiscent of objects due to their lack of marking, but exhibit critical behavioral differences in relation to them. Let us compare the examples in (5–6). The fact that the predicate in (5) is transitive is revealed by the form of the pronominal subject, which bears the A-enclitic *=n*. Therefore, *atsa* ‘manioc’ in (5) is a grammatical object, which remains unmarked as is the case of absolutive arguments. In (6), we find the bare noun phrase ‘*atsa* ‘manioc’ as the quasi-object of the intransitive verb *pishin* ‘lack’ (note that the subject of *pishin* ‘lack’ carries the S-marker *=x*).

- (5) *‘Ën kana ‘atsa pin.*
 ‘Ë=n kana ‘atsa pi-i-n
 1SG=A NAR:1SG manioc eat-IPFV-1/2
 ‘I eat manioc.’
- (6) *‘Ëx kana ‘atsa pishinin.*
 ‘Ë=x kana ‘atsa pishin-i-n
 1SG=S NAR:1SG manioc lack-IPFV-1/2
 ‘I lack manioc.’

3 Verbal reflexive markers

The languages of the world may show different mechanisms for reducing valence, including (i) passives and anticausatives; (ii) antipassives; and (iii) reflexives and reciprocals (see the discussion in Dixon & Aikhenvald 2000). In Kakataibo, there is special verbal morphology for reflexives and reciprocals (and a non-productive middle marker), but there are no passive, antipassive or anticausative markers.

Following Haspelmath (2023 [this volume]), I define a reflexive voice marker as a verbal affix that indicates the coreference of two participants of a verb (the object participant is coreferential with the subject participant). In this section, I briefly discuss the uses and functions of the reflexive marker in Kakataibo (§3.1), and introduce the middle marker of the language, which has reflexive functions (§3.2).

3.1 The reflexive marker

The Kakataibo reflexive verbal marker *-akat* (and its allomorph) is a derivative suffix (see Zariquiey 2018: 307). In terms of its usage, the Kakataibo reflexive marker fits the definition provided by Haspelmath (2023 [this volume]): it is a marker that appears on the verb stem and indicates that two participants of the event expressed by the verb are coreferential. In many languages, the reflexive voice marker reduces the verbal valency. One important piece of information, however, is that, as indicated in §1, Kakataibo makes a rigid distinction between transitive and intransitive verbs (see 3–4). Therefore, in morphological terms, the reflexive marker can only be used on transitive and ditransitive stems. Reflexive transitive and ditransitive stems become grammatically intransitive, in terms of how transitivity is encoded and defined in the language (see Zariquiey 2017 for a discussion of more intricate cases related to bivalent intransitives and Zariquiey 2018: 284–288 for more on transitivity in Kakataibo).

As reported by Zariquiey (2018: 307), the Kakataibo reflexive marker exhibits one of the most complex allomorphic alternations in the language, as it may surface as one of the following allomorphs: *-akat*, *-(ë)kët*, *-(u)kut*, *-(i)kit*, *-mët* and *-mëkët*. The first allomorph appears in the majority of contexts, while *-(ë)kët*, *-(u)kut*, and *(i)kit* surface when following a stem that ends in a syllable containing *ë*, *u*, and *i*, respectively.² Thus, *-(ë)kët*, *-(u)kut*, and *(i)kit* are the result of a vowel

²I have no examples of *-(e)ket*, simply because there are no transitive predicates attested in my database that end in the vowel *e*. In addition, there is no *-(o)kot* allomorph: when a transitive predicate ends in *o*, as is the case of forms carrying the factitive *-o*, it takes the reflexive form *akat*.

harmony process. If the preceding syllable does not have an overt coda (only fricatives and the nasal *n* can act as syllable codas), we obtain *-kët*, *-kut*, and *-kit*. If the preceding syllable ends in a fricative, we obtain *-ëkët*, *-ukut*, and *-ikit*. Finally, if the stem ends in *n*, the allomorphs *mët* and *mëkët* appear in apparently free variation. In the examples in (7–8), we find two instances of the reflexive marker. In (7), it surfaces as *-kut* and attaches to the transitive verb *churu* ‘untie’, and in (8), it surfaces as *-mët* and attaches to the transitive predicate *bëman* ‘touch in the eyes’.

- (7) *matsut-ia=bi* *kaisa* *chaxu a=n*
 sweep-s/A>P:SE=EMPH NAR:REP:3 deer 3SG=A
churu-kut-kwain-kin *kaisa* *xanu xëni-rá*
 untie-REFL-passing:INTR-S/A>A:SE NAR:REP:3 woman old:ABS-DIM
chaxu=n makwëx-akë-x-ín
 deer=ERG beat.up-REM.PST-3-PROX
 ‘It is said that, while (the woman) was sweeping, the deer beat her up,
 untying himself.’
- (8) *kaisa uni ëëëëëë ki-i* *kaisa*
 NAR:REP:3 person:ABS ëëëëëë say:INTR-S/A>S:SE NAR:REP:3
bë-man-akat-akë-x-ín
 eyes-touch-REFL-REM.PST-3-PROX
 ‘It is said that the man touched himself in his eyes saying “ëëëëëë”.

In (9–10), we illustrate the verbs *churu* ‘untie’ (also in 7) and *bë-man* ‘eyes-touch’ (also in 8) in their non reflexive usage, proving that these two verbs are lexically transitive.

- (9) *Juan=nën ka ain kamun churu-bëtsin-a-x-a*
 Juan=ERG NAR:3 3:POSS dog:ABS untie-coming:TR-IPFV-3-NON.PROX
 ‘Juan untied his dog, while coming.’
- (10) *Juan=nën ka ain kamun bë-man-bëtsin-a-x-a*
 Juan=ERG NAR:3 3:POSS dog:ABS eyes-touch-coming:TR-IPFV-3-NON.PROX
 ‘Juan touched his dog in the eyes, while coming.’

With a few transitive verbs, the reflexive marker is used to build a construction, where the S argument is linked to the patient of the event, and the agent is not overtly expressed. See the example in (11). Although there is not a proper passive construction in Kakataibo, constructions like the one in (11) can be interpreted as passive-like, which are primarily attested with the verb *më* ‘beat up’

and, for some speakers, also with *bits* ‘pick up’ and *mëra* ‘find’ (this passive interpretation is more widely found in Shipibo-Konibo reflexive constructions; see Valenzuela 2003: 775–800). For many Kakataibo speakers, the passive-like use of the reflexive implies that there is some sort of kinship relationship between the two participants. Thus, there is no coreference relation between the two participants, but there is some sort of inalienable relation, which make them in some way related. See the example in (11), where the only possible interpretation of the passive-like reading is that the agent was the father or the uncle of the patient. In this kind of construction, the Agent cannot be overtly expressed and is always inferred (see Keenan 1985: 253–254 for a brief discussion of reflexives as a cross-linguistically common source for passives). Note that in (11) a reflexive interpretation is also possible.

- (11) *mi=x kamina më-akat-a-n*
2SG=S NAR:2 beat.up-REFL-PFV-1/2
i. ‘You were hit (by your father/your uncle).’
ii. ‘You hit yourself.’

3.2 The middle marker

The Kakataibo marker *-t*, glossed as ‘middle’ in Zariquiey (2018: 308), is not very productive, but it appears in combination with a few transitive verb roots, as a valence decreasing and transitivity reducing strategy. Crucially, as is often the case with so-called middle markers, *-t* in Kakataibo gets both stative (non-reflexive) and reflexive interpretations. For some verbs, one of these functions is not available, as indicated in the examples in Table 3. As can be seen in §3.1, all the allo-morphs of the Kakataibo reflexive marker (*-akat*, *-(ë)kët*, *-(u)kut*, *-(i)kit*, *-mët* and *-mëkët*) exhibit a final *t*, which is likely to be diachronically related to the marked glossed here as middle. Note that the reflexive marker discussed in §3.1 does not have a stative interpretation. A further difference between the reflexive and the middle marker is that the former is much more widespread.

As indicated in §2, Kakataibo verbs are lexically either transitive or intransitive. A few roots like **tsó-* ‘seat, sit down’ or **ërë-* ‘light, burn’ are not subcategorized for transitivity and are obligatorily combined with one of the suffixes *-n* ‘transitive’ or *-t* ‘intransitive’, thus producing pairs of verbs that are distinguished by transitivity. This constitutes an instantiation of what Valenzuela (2017: 416–417) calls “alternative derivation”. The marker in the intransitive form in these transitivity-based pairs, *-t*, is the semi-productive middle described in this subsection, and the meaning of the intransitive member of the verb pairs often gets

Table 3: The Kakataibo middle marker

Transitive form	Meaning	Intransitive form	Stative meaning	Reflexive meaning
<i>pëxku</i>	'cure somebody'	<i>pexku-t</i>	'become cured'	'cure oneself'
<i>unë</i>	'hide'	<i>unë-t</i>	'be hidden'	'hide oneself'
<i>xui</i>	'grill'	<i>xui-t</i>	'be grilled'	—
<i>këñu</i>	'finish'	<i>këñu-t</i>	'finish up'	—
<i>chuka</i>	'wash'	<i>chuka-t</i>	—	'wash oneself'

reflexive-like interpretations, as illustrated in Table 4. The difference between the examples in Tables 3 and 4 has to do with the fact that in Table 3 the unmarked form of the predicate is lexically transitive, whereas in Table 4, both the transitive and the intransitive predicates are equally marked.

Table 4: Example of transitivity alternative derivation in Kakataibo

Etymological root	Transitive form	Meaning	Intransitive form	Meaning
*tsó	<i>tsón</i>	'seat'	<i>tsót</i>	'sit down, live'
*ëré	<i>ëren</i>	'light'	<i>ëret</i>	'burn'
*niri	<i>nirin</i>	'drag'	<i>nirit</i>	'crawl'
*nanë	<i>nanën</i>	'submerge (sth.)'	<i>nanët</i>	'submerge oneself'
*chiki	<i>chikin</i>	'take out'	<i>chikit</i>	'go out'

4 Reflexive nominals

According to Haspelmath (2023 [this volume]), reflexive nominals are the most prominent type of reflexivizer in the world's languages. Kakataibo exhibits a full paradigm of emphatic pronouns which are etymologically made up of anaphoric (non-reflexive) pronouns combined with the self-intensifier adverbial enclitic =*bi*. According to Haspelmath (2023 [this volume]), the use of emphatic pronouns as reflexive pronouns is well attested cross-linguistically, and König et al. (2005) reported 94 languages (of a total of 168) with identity of reflexive pronouns and emphatic pronouns of the Kakataibo sort. Kakataibo also has another instance of a reflexive nominal: the noun *nami* 'body' may also be used to express agent-patient coreference, or coreference in a minimal clause. Both empathic pronouns

and the noun *nami* ‘body’ require the verbal reflexive marker in order to be part of reflexive constructions (but see the example in 16a). Emphatic pronouns are discussed in §4.1, while the instances of the noun *nami* ‘body’ in reflexive constructions is presented in §4.2.

4.1 Emphatic pronouns

Kakataibo personal pronouns make up a quite complex paradigm. Kakataibo pronouns are associated with two non-singular forms. One can be rendered as archaic (see Zariquiey 2006), whereas the other, which is based on the general plural marker of the language =*kama*, can be considered as innovative. The archaic forms are often interpreted as dual (in the case of 1st and 2nd person) or paucal (in the case of 3rd person) by some speakers, but this interpretation is not systematic. Kakataibo also exhibits a distinction between 1st person plural inclusive and 1st person plural exclusive, which is falling into disuse, but can be reconstructed for the proto-language (Zariquiey 2006). Pronouns in Kakataibo exhibit a tripartite case marking system, where the A, S and P functions are expressed differently (the first two functions are marked by two different enclitics and the last one is unmarked). Kakataibo pronominal forms are presented in Table 5 (adapted from Zariquiey 2018: 177).

Table 5: Personal pronouns in Kakataibo

Person	A	S	P
1SG	‘ë=n	‘ë=x	‘ë
2SG	<i>mi=n</i>	<i>mi=x</i>	<i>mi</i>
3SG	<i>a=n</i>	<i>a=x</i>	<i>a</i>
1DU (inclusive)	<i>nu=n</i>	<i>nu=x</i>	<i>nu</i>
1PL (inclusive)	<i>nukama=n</i>	<i>nukama=x</i>	<i>nukama</i>
1PL (exclusive)	‘ë <i>kama=n</i>	‘ë <i>kama=x</i>	‘ë <i>kama</i>
2 (DU)	<i>mitsu=n</i>	<i>mitsu=x</i>	<i>mitsu</i>
2PL	<i>mikama=n</i>	<i>mikama=x</i>	<i>mikama</i>
3 (DU/paucal)	<i>atu=n</i>	<i>atu=x</i>	<i>atu</i>
3PL	<i>akama=n</i>	<i>akama=x</i>	<i>akama</i>

Kakataibo’s personal pronouns can be combined with the adverbial enclitic =*bi* ‘emphatic’ to produce emphatic pronominal forms, which can be translated as *self*-pronouns into English. Emphatic pronouns with =*bi* seem to some extent

lexicalized. Valenzuela (2003: 188–191) reports for the sister language Shipibo-Konibo that emphatic pronouns can be modified (again) by the enclitic *=bi* producing forms like *ëbi=bi* [1SG:EMPH=EMPH], but so far I have not found equivalent examples in Kakataibo.

Differently from non-empathic pronouns, emphatic ones exhibit a neutral case alignment, according to which they remain unmarked, regardless of their grammatical function. However, the 1st person singular emphatic pronoun can also take a dedicated ‘S’ marker *=x*, thus producing an example of a horizontal alignment type. This is summarized in Table 6 (taken from Zariquiey 2018: 177).

Table 6: Emphatic personal pronouns in Kakataibo

Person	A	S	P
1SG	‘ëbi	‘ëbi(=x)	‘ëbi
2SG/PL	<i>mibi</i>	<i>mibi</i>	<i>mibi</i>
3SG/PL	<i>abi</i>	<i>abi</i>	<i>abi</i>
1PL	<i>nubi</i>	<i>nubi</i>	<i>nubi</i>

In (12), I illustrate the paradigm of the 1st person emphatic pronoun. In (12a), it appears as the S argument of the intransitive verb *ux* ‘sleep’; in (12b) it appears as the A argument of the transitive verb *mëë* ‘hit’; and in (12c) the 1st person emphatic pronoun appears as the P argument of the same transitive verb. None of the examples in (12) features a reflexive use of an emphatic pronoun, since the criteria proposed by Haspelmath (2023 [this volume]) are not satisfied: there is no coreference relation with an antecedent with subject function.

- (12) a. ‘ëbi=x *kana* ‘ux-a-x-a
 1SG:EMPH=S NAR:1SG sleep-PFV-3-NON.PROX
 ‘I myself slept.’
- b. ‘ëbi *kana* *a* *mëë-a-x-a*
 1SG:EMPH NAR:1SG 3SG:P hit-PFV-3-NON.PROX
 ‘I myself hit him.’
- c. ‘ëbi *ka* *a=n* *mëë-a-x-a*
 1SG:EMPH NAR:3 3SG:P=A hit-PFV-3-NON.PROX
 ‘He hit ME (of all people).’

Emphatic pronouns can also be used in combination with the verbal reflexive marker introduced in §3.1, as illustrated in (13a), which is basically synonymous

with (13b), although (13a) is often interpreted with a more volitional and controlling subject. In any case, it is clear that the reflexive meaning comes from the verbal marker and not from the emphatic pronoun. Note that, due to fact that emphatic pronouns exhibit a neutral alignment type, it is not obvious whether the pronoun is the subject or the object of the construction in (13a), but since the predicate carries the reflexive marker and thus is detransitivized in Kakataibo, we may assume that *abi* in (13a) is a subject pronoun.

- (13) a. *abi ka is-akat-a-x-a*
 3SG:EMPH NAR:3 see-REFL-PFV-3-NON.PROX
 i. ‘She saw herself (voluntarily).’
 ii. ‘He saw himself (voluntarily).’
- b. *a=x ka is-akat-a-x-a*
 3SG=S NAR:3 see-REFL-PFV-3-NON.PROX
 i. ‘She saw herself.’
 ii. ‘He saw himself.’

A slightly different situation is found with reflexive ditransitive constructions, in which the use of an emphatic pronoun does trigger a significant difference in interpretation. Ditransitive predicates use two different reflexive strategies depending on the argument that is coreferential with the subject. If the T (theme) is coreferential with the subject, only the reflexive marker is required. If the R (recipient) is coreferential with the subject, in addition to the reflexive marker, an emphatic pronoun is required. Therefore, non-emphatic pronouns in reflexivized ditransitives always trigger a co-reference relation between the subject and the T argument (a T-reflexive), whereas emphatic ones systematically trigger a co-reference relation between the subject and the R argument (a R-reflexive). This is illustrated in (14). In (14a), the non-emphatic pronoun triggers a T-reflexive, whereas in (14b), the emphatic pronoun triggers a R-reflexive.

- (14) a. *‘ë=x kana ‘inan-mët-i-n*
 1SG=S NAR:1SG give-REFL-IPFV-1/2
 ‘I will give myself (to someone else).’
 *“I will give (something) to myself.”
- b. *‘ëbi=x kana ‘inan-mët-i-n*
 1SG:EMPH=S NAR:1SG give-REFL-IPFV-1/2
 ‘I will give (something) to myself.’
 *“I will give myself (to someone else).”

The 1st person emphatic pronominal form ‘ëbi in (14b) lacks an identifiable antecedent and both the pronominal form in (14a) and the one in (14b) are subjects. The reflexive meaning in both examples comes from the verbal reflexivizer. The use of a non-emphatic pronoun in (14a) and an emphatic one in (14b) only triggers a different type coreference relation: in (14a) the Subject is coreferential with T, whereas in (14b) the Subject is coreferential with R.

A more prototypical instance of an emphatic pronoun used as a reflexive pronoun follow in (15a). In (15a), we find an example of an emphatic pronoun occurring as a reflexive object and it is clear that there is an antecedent which is crucially the subject of the clause. For this function to be accomplished by an emphatic pronoun, two requirements are in order: (i) the subject cannot be itself an emphatic pronoun (see 15b); and (ii) the verb must carry itself a reflexive marker (see 15c). The fact that the (15c) is ungrammatical reveals that emphatic pronouns are not a truly reflexive pronouns, but just emphatic pronouns used in reflexive constructions.

- (15) a. ‘ë=x kana ‘ëbi is-akat-i-n
 1SG=S NAR:1SG 1SG:EMPH see-REFL-IPFV-1/2
 ‘I look at myself’
- b. * ‘ëbi=x kana ‘ëbi is-akat-i-n
 1SG:EMPH=S NAR:1SG 1SG:EMPH SEE-REFL-IPFV-1/2
 ‘I look at myself’
- c. * ‘ë=x kana ‘ëbi is-i-n
 1SG=S NAR:1SG 1SG:EMPH see-IPFV-1/2
 ‘I look at myself’

A more prototypical use of an emphatic pronoun as a reflexive pronoun can be found with the intransitive verb *bana* ‘speak’. In this case, the requirement of the presence of a verbal reflexivizer does not apply since the verbal reflexive marker can only be combined with transitives and ditransitives (16a). Note, however, that the restriction regarding the use of an emphatic pronoun in the subject position holds (16b). It would be interesting to explore if such construction is applicable with other intransitives.

- (16) a. ‘ë=x kana ‘ëbi bana-i-n
 1SG=S NAR:1SG 1SG:EMPH speak-IPFV-1/2
 ‘I speak to myself’

- b. * *‘ëbi=x kana ‘ëbi bana-i-n*
1SG:EMPH=S NAR:1SG 1SG:EMPH speak-IPFV-1/2
'I speak to myself.'

The examples in (15a) and (16a) feature instances of emphatic pronouns being used in reflexive constructions. It is important to note, however, that in both examples the predicate needs to be intransitive, either because of the presence of a reflexive marker in the verb (15a), or because the verb is already intransitive (16a). Only the example in (16a) might be seen as a true instance of an emphatic pronoun being used as a proper reflexive pronoun, since in (15a), although we do find co-reference with the subject, there is a reflexive marker in the verb. The example in (16a) is highly idiosyncratic and it might be a very special use exclusively associated with the verb *bana* 'say'.

With the exception of (16a), all the cases of emphatic pronouns in reflexive constructions, even those ones with a co-referential subject in the same clause require the use of an external reflexivizer: a verbal reflexive. This suggests that emphatic pronouns are not reflexive pronouns. One may hypothesize a future stage in which the verbal reflexive marker is not required anymore and thus truly reflexive pronouns are developed in Kakataibo. This stage, however, has not occurred in the language (with the exception of the highly idiosyncratic example in (16a)).

4.2 *Nami* 'body'

With some transitive verbs, Kakataibo exhibits a construction in which the word *nami* 'body' is used to express a co-referentiality relation equivalent to the one associated with reflexive constructions. Languages of world often exhibit reflexive pronouns etymologically related to nouns with meanings like 'body' or 'head' (Schladt 2000; Haspelmath 2023 [this volume]). In the case of Kakataibo, the use of *nami* 'body' as part of reflexive constructions requires it to be explicitly accompanied by a possessive pronoun (the possessive pronoun has to be coreferential with the subject of the verb) and it also needs to carry the emphatic marker =*bi*. This is illustrated in (17). Note that a non-reflexive interpretation ('his own body') was also given in elicitation.

- (17) *Juan ka ain nami=bi is-i-a*
Juan NAR:3 3SG:GEN body:ABS=EMPH see-IPFV-NON.PROX
i. 'Juan sees himself'
ii. 'Juan sees his own body'

As in the case of the emphatic pronouns discussed in §3.1, it is clear that the coreference interpretation associated with the reflexive meaning in (16) comes from an external element, in this case the possessive pronoun and the emphatic marker *=bi*. Therefore, the use of *nami* ‘body’ as a reflexive nominal has not been fully grammaticalized.

5 Conclusions

The present chapter has discussed the main strategies for expressing reflexive meanings in Kakataibo. The language exhibits a productive verbal reflexive voice marker, which is used on transitive verbs in order to indicate coreferentiality between their two participants (which also detransitivizes the verb). The middle marker of the language, *-t*, also gets reflexive overtones with some predicates, but is not fully productive. Kakataibo also has constructions that may be seen as reflexive nominals. These include the use of emphatic pronouns and the use of the noun *nami* ‘body’ with transitive predicates to express reflexive meanings. The reflexive interpretation of emphatic pronouns requires the presence of the reflexive marker, whereas the reflexive use of the noun *nami* ‘body’ requires the possessive marker and the emphatic clitic *=bi*. This fact suggests that they are not proper reflexive nominals but elements that contribute to the interpretation of reflexive constructions, in which the co-referentiality component of the meaning comes from a different element. Their need for some extra markers of co-reference (a reflexive marker or a possessive pronoun) suggests that in Kakataibo there are not fully grammatical nominal reflexives. How should we refer to the reflexive uses of the emphatic pronouns and the noun *nami* ‘body’ in Kakataibo? What does it imply for such nominal elements that they can participate in reflexive constructions only the condition that the verbal reflexive is also there? Answering such questions may have consequences for our understanding of reflexive nominals as a descriptive category and the nature of nominal reflexives in languages which already have a reflexive verbal marker.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

A	most agentive participant of a transitive predicate	R	recipient-like argument of a ditransitive predicate
DIM	diminutive	REM.PST	remote past
EMPH	emphatic	REP	reportative
NAR	narrative	SE	simultaneous event
NON.PROX	non-proximal to the addressee	T	theme argument of a ditransitive predicate

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Chapter 30

Reflexive constructions and middle marking in Mojeño Trinitario

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Mojeño Trinitario (Arawak, Bolivia) shows a middle marker *-wo* that encodes, among other functions, the coreference of subject and object in the same clause, within reflexive constructions. The middle marker *-wo* is not only used for prototypical reflexive situations (the central interest of this volume), but also for situations types that are best considered middle (in line with Kemmer 1993), including grooming, non-translational motion, other body actions, translational motion and positionals, reciprocals, mental events (cognition and emotion), and spontaneous events. The middle marker *-wo* can also be used in situation types where it just adds various types of emphasis on the subject. Interestingly, the marker *-wo* is only one of several middle-marking strategies in the language. Coreference other than between the subject and the object, within a clause or beyond the clause, are left unmarked, as the language has neither a set of reflexive pronouns nor of reflexive possessor indexes. Coreference beyond the reflexive construction is therefore left as a possible interpretation, depending on the semantico-syntactic and discourse context.

1 Introduction

Mojeño Trinitario is a language of the Arawak family spoken in Bolivia (§2). Reflexive constructions in Mojeño Trinitario make use of a middle marker *-wo* as in (1–2) (§3). This encodes, among other functions, the coreference of what are the subject and the object in a corresponding non-reflexive clause (2).¹

¹This task is described in San Roque et al. (2012).



- (1) *Ñ-omuire=po t-etpiri-k-wo=po.*
3M-also=PFV 3-arrange-ACT-MID=PFV
'He got ready too (lit. he arranged himself too).' [T38.186]
- (2) *P-etpiri-gi-a j-ma-ro-no.*
2SG-arrange-ACT-IRR DEM-NH.PL-MED-PL
'Arrange these!' [about pictures in the Family Problem Picture Task]
[T45.002]

Other types of coreference, within or beyond a clause, are left unmarked (§4), as the language has neither a set of reflexive pronouns nor a set of reflexive possessor indexes. Coreference beyond the reflexive construction is therefore left as a possible interpretation, depending on the semantico-syntactic and discourse context. The middle marker *-wo* is not only used for prototypical reflexive situations, the central interest of this volume (§5), but also for situation types that are best considered middle (in line with Kemmer 1993), including grooming, non-translational motion, other body actions, translational motion and positionals, reciprocals, mental events (cognition and emotion), and spontaneous events. The middle marker *-wo* can also be used in situations types where it does not show a middle function, but puts various types of emphasis on the subject. Interestingly, the marker *-wo* is only one of several middle-marking strategies in the language, and it is the most agent-oriented one (§6).

The data on which this paper is based have been collected in the field by the author since 2005. They constitute a database of 8 hours of (semi)-spontaneous texts, 2 hours of isolated sentences elicited with stimuli, and additionally 4900 elicited sentences (Rose 2018).

2 Introduction to Mojeño Trinitario

2.1 The language

Mojeño (trin1274) is an endangered Arawak language (Gill 1957; Rose 2015b) spoken in Lowland Bolivia (Figure 1).² The Trinitario dialect is spoken by a few thousand speakers (Crevels & Muysken 2009), most of whom are bilingual, with Spanish as their second language.

Mojeño Trinitario is a highly agglutinating language, with a large number of suffix/enclitic slots and a few prefix slots. Lexical and grammatical morphemes display several surface forms, due to a rich system of morphophonemic rules

²This map is the English version of a map originally published in French in Rose (2010).

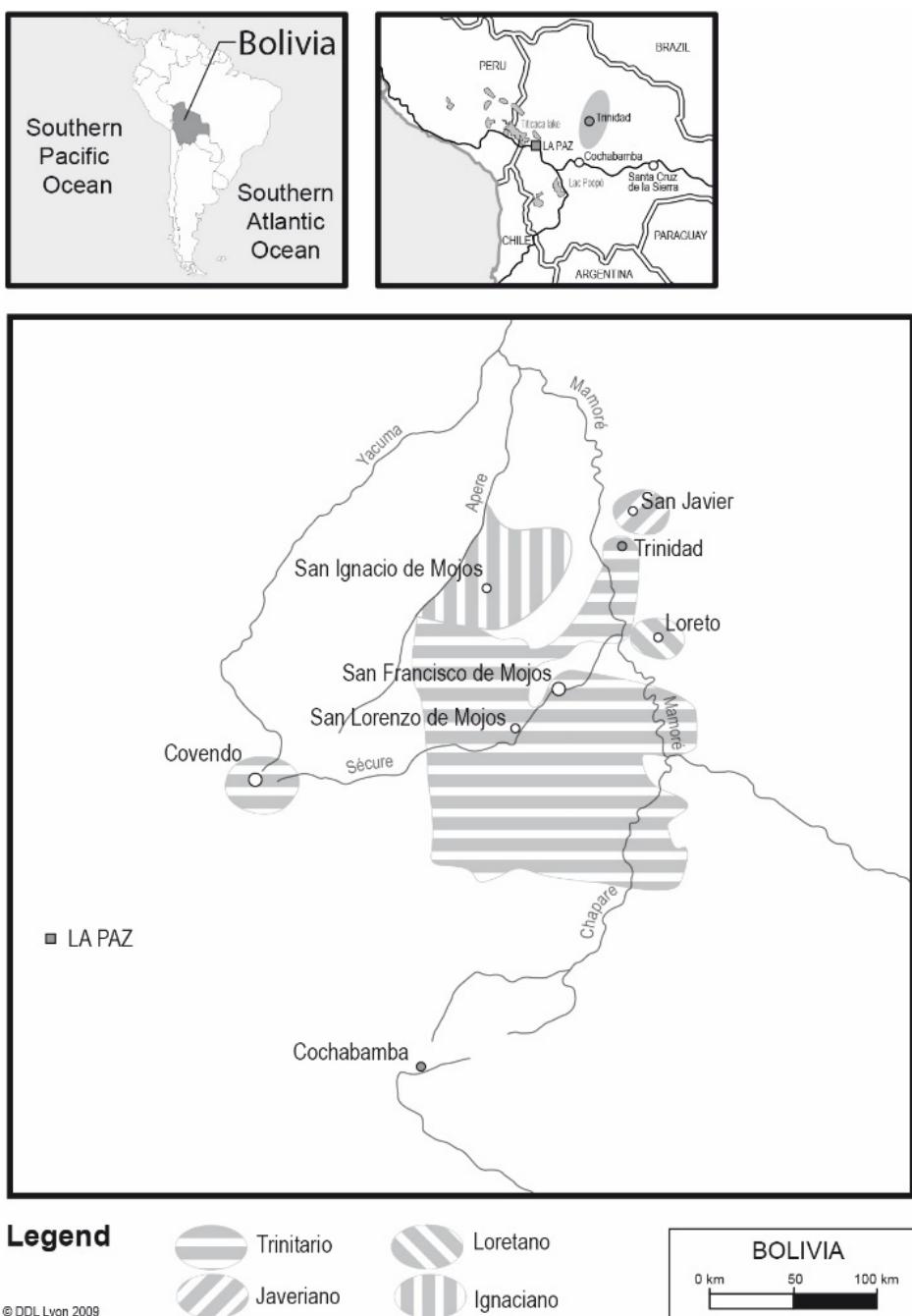


Figure 1: Geographical distribution of the Mojeño speakers

and a pervasive process of vowel deletion (Rose 2019). The next sections will present some aspects of the grammar of Mojeño Trinitario that are important for the issue of reflexivization: pronominal markers (§2.2), argument encoding (§2.3) and the active suffix (§2.4).

2.2 Sets of pronominal markers

Mojeño Trinitario shows four sets of pronominal markers: free pronouns, demonstrative formatives,³ person prefixes and person suffixes. Table 1 shows that these sets share the same semantic categorization and cognate forms (demonstratives, of little relevance here, are left out).⁴ For 3rd person, note that number is neutralized for non-human, gender is neutralized for human plural, and there is a genderlect distinction for the 3rd person human singular masculine depending on the gender of the speaker (Rose 2013, 2015a). Importantly, there is no set of reflexive pronominals. The same affix sets are used on both verbs and nouns: prefixes for subject on verbs and possessor on nouns, suffixes for object on verbs and subject on non-verbal predicates. The only difference is that the semantically non-specific 3rd person marker *t-* is found on verbs only. The number of a 3rd person subject marked with *t-* can be specified with the plural suffix *-ono*, also used to mark plurality on nouns. The use of the pronominal markers is discussed in the next section.

2.3 Argument encoding

Argument encoding is essentially marked by the obligatory person indexation (the last two columns of Table 1). Noun phrases are indeed optional, and unflagged. Free pronouns are also used optionally, usually when the referent has been identified previously.⁵ When noun phrases are overt, the basic order is SVO for transitive clauses and VS for intransitive clauses.

The obligatory person indexation works as follows. Subjects are indexed on verbs with prefixes (3). 1st and 2nd person objects are indexed on verbs with suffixes (4), while 3rd person objects are not overtly marked on the verb. Subject and object affixes on the same verb cannot be coreferential. A typological particularity of Mojeño Trinitario is that the presence and the person of an object

³These take a demonstrative prefix *p-* and one of a set of distance/epistemic suffixes to form a demonstrative (Rose 2017).

⁴For a full presentation and discussion of the pronominal paradigm, see Rose (2015b).

⁵Free pronouns also show a use within noun phrases headed by a noun, where they either precede or replace the determiner (free pronoun + noun, or free pronoun + determiner + noun).

Table 1: Mojeño Trinitario pronominal markers

	PRONOUNS	PREFIXES (A, S, Poss)	SUFFIXES (P, subject of non-verbal predicate)
1SG	<i>nuti</i>	<i>n-</i>	<i>-nu</i>
2SG	<i>piti</i>	<i>py-</i>	<i>-vi</i>
1PL	<i>viti</i>	<i>vy-</i>	<i>-(wok)ovi</i>
2PL	<i>eti</i>	<i>a-</i>	<i>'e</i>
3M(SG.H) speaker♂	<i>ema</i>	<i>ma- (~ mu-, m-)</i>	-
3M(SG.H) speaker♀	<i>eñi</i>	<i>ñi- (~ ñ-)</i>	-
3F(SG.H)	<i>esu</i>	<i>s-</i>	-
3NH(SG/PL)	<i>eto</i>	<i>ta- (~ t-)</i>	-
3PL(H)	<i>eno</i>	<i>na- (~ n-)</i>	<i>-woko</i> (3PL)
3		<i>t- (~ ty-)</i> verbs only	

triggers a differential indexation of 3rd person subjects (Rose 2011). On the one hand, the non-specific 3rd person subject prefix *t-* is found both on intransitive verbs as in (5) and on transitive verbs with a 1st or 2nd person object as in (4). On the other hand, a semantically specific 3rd person subject prefix (*ma-*, *ñi-*, *s-*, *na-*, or *ta-*) is found when the object is a 3rd person as in (3). The selection of a 3rd person subject prefix depends on transitivity, which does not solely depend on the number of the arguments and the person of the co-argument, but is also sensitive to various transitivity criteria, like aspect, mood, information structure, etc. (Rose 2011).

- (3) *Ma 'moperu-gra mu-em-'o=po to jani-on.*
ART.M child-DIM 3M-see-ACT=PFV ART.NH bee-PL
‘The little boy saw the bees.’ [T11.019]
- (4) *T-im-it-ko-wokovi.*
3-CAUS-know-ACT-1PL
‘He teaches us.’ [T28.099]
- (5) *T-junopo=po te to smeno.*
3-run=PFV PREP.NH ART.NH woods
‘It ran through the woods.’ [T11.018]

Mojeño Trinitario shows A-preserving lability, also called agentive ambitransitivity: the same root can be used without any formal change either transitively with both A and P, or intransitively with a unique S participant (with S being semantically equivalent to A). Ambitransitivity is observable in the example (6), where the root *ew* ‘sow’ is used intransitively in the first clause and transitively in the second clause (observe the change in 3rd person subject indexes).

- (6) *Ene t-ew-ko-m=po, na-ew-ko=po to arusu.*
 and 3-sow-ACT-PL=PFV 3PL-SOW-ACT=PFV ART.NH rice
 ‘And they start to sow, they sow rice.’ [T21.038]

Obliques (adjuncts or peripheral arguments) always occur with a preposition, and are also distinguished from objects by not being indexed on the verb. There is a single simple preposition *te*, illustrated in (5),⁶ that shows multiple meanings such as ‘with’, ‘in’, ‘on’, ‘for’, ‘from’, etc.

2.4 The active suffix

Mojeño Trinitario roots are either active (i.e. dynamic) or stative, and activity is overtly marked at the stem level with the active suffix (-ko ~ -cho ~ -'o).⁷ This suffix comes almost at the end of the verb stem, made out of the root and its derivational morphology, and sketched in Figure 2.⁸

CAUS/MID-root-RED-CLF/APPL3-N-PLURACT-ACT/RECP-APPL1/2/PASS

Figure 2: Verbal stem template

The active suffix is normally used with active roots (be they intransitive or transitive). The active suffix can be seen in (3–4) and (6) in the verb stems *im-o* ‘see/watch’, *it-ko* ‘know’ and *ew-ko* ‘sow’. However, it does not show in some active verb stems, as on *junopo* ‘run’ in (5) and *samo* ‘feel’ in (7) (see more below on this distribution). Stative roots such as *itve* ‘be sweet’ do not normally take the active suffix, but when they do, they derive an active (transitive) verb stem, such as *itve-cho* ‘sweeten’. Conversely, the active suffix is left out of constructions

⁶The form *te* is actually a reduced form of a prepositional root *ye'e* with a 3rd person non-human prefix *ta-*. If the preposition introduces a 1st or 2nd person, or a human 3rd person, this is indexed as a prefix on *ye'e*, as in *p-ye'e* ‘with you, for you, etc.’

⁷The allomorphs are selected depending on the preceding vowel (often not visible due to the rhythmic syncope process).

⁸The interaction of the active suffix with the reciprocal will be discussed in §6. Also note that the middle marker present in the stem template is a prefix, distinct from the middle suffix *-wo*.

that are stativizing active roots, like the patient nominalization in (8) where the nominalizer replaces the active suffix.

- (7) *Je'e ty-uri p-samo?*
so 3-good 2SG-feel
'So, is it good how you feel?' [T19.114]
- (8) *na-ni-ru*
3PL-eat-SP.P.NMLZ
'their food' [T19.102]

There are two inflectional classes of active stems. The two rows of Table 2 illustrate the behavior of the active suffix with respect to these two classes. Most active verbs always carry the active suffix. This is illustrated with *jaño-ko* in the first row: the active suffix is present in the absence or presence of any other suffixes. A smaller number of active verbs (all with root-final /o/) take the active suffix in some contexts only, basically when carrying stem-internal suffixes (the pluractional *-ri*, a classifier, or the reduplicant). Otherwise, when carrying no suffix or stem-external suffixes (such as *-nu*, first singular object), this class of active verbs does not show the active suffix. This is illustrated in the second row with *jikpo* that does not show the active suffix in the first two columns, but does so in the third one. With this background in mind, we will see shortly that the middle-marker *-wo* interacts unexpectedly with the active suffix §3.1.

Table 2: The active suffix on the two classes of active stems

Only active	With most stem-external suffixes	With all stem-internal suffixes
<i>n-jaño-ko</i> 1SG-watch-ACT 'I watch'	<i>ty-jaño-k(o)-nu</i> 3-watch-ACT-1SG 'he/she/it watches me'	<i>ty-jaño-ri-ko</i> 3-watch-PLURACT-ACT 'he/she/it always watches'
<i>n-jikpo</i> 1SG-answer 'I answer'	<i>ty-jikpo-nu</i> 3-answer-1SG 'he/she/it answers me'	<i>ty-jikpo-ri-ko</i> 3-answer-PLURACT-ACT 'he/she/it always answers'

3 Reflexive constructions in Trinitario

There is a single reflexive construction in Mojeño Trinitario. It involves the middle marker *-wo* and marks the coreference of core participants. There is no other morphosyntactic strategy to encode reflexivity in the language (see §4). This section first presents the morphological properties of the middle suffix *-wo* (§3.1), which are the same whatever its use, and then presents the semantics (§3.2) and the syntax (§3.3) of the reflexive construction only, in line with the focus of the volume. Other uses of the middle marker will be discussed in §5.

3.1 Morphological properties of the middle suffix *-wo*

The middle suffix *-wo* attaches to the verb stem, in the same slot where object suffixes appear (they never combine). This distributional fact could lead to an analysis where *-wo* is a pronominal element, but this analysis does not hold because *-wo* is invariant whatever the person of the subject, as shown in (9) and (10). Figure 3 outlines the verb template, where “V stem” stands for the template presented in Figure 2. Please note that the middle suffix *-wo* occurs in a position outside of the stem.

S/A-IRR-VSTEM-IRR-MID/O-COMPAR-EVAL-PL=TAME=DEGREE=TAME=DM

Figure 3: Verbal word template

- (9) *N-etpiri-k-wo=po nuti.*
3-prepare-ACT-MID=PFV 1SG
'I got ready.' [T38.182]
- (10) *V-echpu-ko vi-oso-ko-wo te yuku.*
1PL-get_up-ACT 1PL-heat-ACT-MID PREP.NH fire
'We would get up and warm up next to the fire.' [T25.066]

The middle marker *-wo* has several allomorphs. The first three are predictable through general prosodic and phonological processes of the language, while the fourth results from a more restricted process:

- *-mo* when it immediately follows an /m/, as in *n-sam-mo* [1SG-listen-MID]
'I listen to myself'
- *-v* (realized [β]) before front vowels (after hiatus resolution) or before *y* as in the sequence *-v=yore* [-MID=FUT] used in (21) (the sequence /w+j/ is often realized [u])

- *-w* when the *o* is deleted through rhythmic syncope as in (13)
- this /w/, stranded in coda position after the syncope of *o*, is deleted and compensated by vowel lengthening when it precedes a labial consonant /p/ or /w/ - then the middle marker is not realized at all, but its presence is visible through lengthening of the preceding vowel, as in (41)
- *-po* when it follows the irrealis suffix *-a*, as in (11)

This last allomorph results from a very restricted rule: the labio-velar approximant /w/ (and its realization [β] before front vowels) undergo stopping to /p/ after the irrealis suffix *-a* in the morphemes *-wo* [wo] ‘MID’ and *-wi* [βi] ‘2SG’ (see 62).⁹

- (11) *T-emtyo-k-a-po=pka.*
 3-lose-ACT-IRR-MID=DUB
 ‘It may get lost.’ [T25.148]

A surprising property of the middle suffix is that it makes the active suffix (presented in §2.4) appear on the class of active verbs that show the active suffix only when a stem-internal suffix is present. Table 3 is similar to the last row of Table 2 in showing that the active suffix is present on some verbs, here represented by the verb *echo* ‘know’,¹⁰ only if they take a stem-internal suffix. But the last column adds the information that the middle marker *-wo* is also a trigger of the presence of the active suffix on those active verbs that do not always show the active suffix. In a way, although the middle-marker *-wo* occurs outside of the verb stem, it behaves like a stem-internal suffix. This is consistent with the fact that stem-internal affixes are essentially derivational affixes and build up the semantic and syntactic argument structure of the stem. The position of the middle marker further away from the root is probably to be taken as a sign of a more recent grammaticalization.

⁹The syllable *wo* is also realized *po* with irrealis in roots that are likely the result of the lexicalization of the middle marker. The forms *f'owo* ‘come back’, *if'mowo* ‘find’, and *itkowo* ‘find, succeed’ are synchronically considered as roots, with /wo/ being part of the root. This analysis is due to the fact that the first two forms never occur without *wo*, while the third one has quite a different meaning without *wo*: *it-ko* means ‘know’. Nonetheless, even though *wo* is not segmentable as the middle marker in these forms, the irrealis is still added before *wo* rather than after the root, and *wo* is realized as *po*. As a consequence, roots *f'owo* ‘come back’, *if'mowo* ‘find’, and *itkowo* ‘find, succeed’ show suppletive irrealis forms *f'apo*, *if'mapo*, and *itkapo*.

¹⁰The example in the table is not illustrative of the reflexive meaning per se but of another middle use of the marker *-wo* (see §5).

Table 3: Interaction of the active suffix with stem-internal suffix or middle marker

Only active	With most stem-external suffixes	With all stem-internal suffixes	With middle marker <i>-wo</i>
<i>n-echo</i> 1SG-know 'I know'	<i>wo n-ech-a</i> NEG 1SG-know-IRR 'I don't know'	<i>n-ech-pi-ko</i> 1SG-know-CLF-ACT 'I know (a language, a song, a word)'	<i>wo n-echo-k-a-po</i> NEG 1SG-know-ACT-IRR-MID 'I did not know'

In addition, the middle suffix also applies on verbs that are not active, such as *itna* 'be used to' in (42) (where the verb root is realized *etna* for phonotactic reasons).

3.2 Semantics of the reflexive construction

This section reviews the situation types expressed by the middle marker that can be conceived as falling within the reflexive domain. "Situation types can be thought of as sets of situational or semantic pragmatic contexts that are systematically associated with a particular form of expression." (Kemmer 1993: 7; following Talmy 1972). The Mojeño Trinitario middle marker *-wo* is used on extroverted verbs like (9) to express true reflexive situation types in the sense of Kemmer (1993: 45): "The direct reflexive situation type comprises semantic contexts which involve coreference in an event consisting of a single event frame". Although this situation type is generally conceived as the prototypical reflexive function, it represents only a small part of the uses of the middle marker *-wo* in Mojeño Trinitario: in a random sample of 91 occurrences of *-wo*, only 9 of them (i.e. less than 10%) actually express a direct reflexive situation type. The marker *-wo* is also used on introverted verbs, in situation types often lumped with reflexive:¹¹ these are body action situation types, comprising grooming (12), change in body posture (13), other body actions (14), translational motion (15) and positionals (16). Other situation types that are clearly middle and do not belong to this intermediate body action types are described in §5.

¹¹Kemmer (1993: 53–70) considers these situation types to be distinct from the reflexive situation types because the participant roles are not as easily distinguishable as in reflexive situations.

- (12) *T-vejamuiri-k-wo p-ñi 'chane.*
 3-undress-ACT-MID DEM-M person
 'The man gets undressed.' [PathC.031]
- (13) *Powre-chicha ty-akyo-j-rii-ko-w=ri'i.*
 poor-EMP 3-fold-CLF.amorph-PLURACT-ACT-MID=IPFV
 'Poor him, he is bent, crouched down.' [T40.070]
- (14) *J-ma-ni ty-uuja-ja-me-k-wo-n=ri'i te*
 DEM-NH.PL-PROX 3-scratch-RED-CLF.fabric-ACT-MID-PL=IPFV PREP.NH
n-chokio.
 1SG-be_close
 'These (stinky dogs) are scratching themselves next to me.' [T29.046]
- (15) *T-pojcha-j-ko-wo te j-ena 'mu'ji.*
 3-enter-CLF.amorph-ACT-MID PREP.NH NH.SH-DIST husk
 'He got into that heap of corn husks (to hide).' [T35.061]
- (16) *T-chum-ko-wo.*
 3-hang-ACT-MID
 'It hangs.' [Answer to the question: Where is the lamp?] [LocC.13]

3.3 The syntax of the reflexive construction

As mentioned above, the middle suffix *-wo* can indicate coreference between two core participants that could be expressed as subject and object in a non-reflexive construction (compare 1 and 2). These two participants can be agent and patient as in (17), or other semantic roles like stimulus and experiencer as in (18). Through combination with the benefactive applicative as in (19), the subject of the reflexive construction can combine the roles of agent and benefactive (the applied object of the applicative construction).

- (17) *S-yoyure-wo=richu s-echti-k=ri'i to s-ye'e=yo.*
 3F-rush-MID=RESTR 3F-cut_soft-ACT=IPFV ART.NH 3F-GPN=FUT
 'She rushed to cut her share.' [T27.031]
- (18) *N-imooro-k-wo.*
 1SG-watch-ACT-MID
 'I am looking at myself.' [elicited]
- (19) *Ma-wachri-s-no-wo.*
 3M-buy-ACT-APPL-MID
 'He bought it for himself.' (adapted from Gill 1957: 132)

The middle marker is found with the reflexive meaning on transitive verb stems only, since this meaning involves a situation type with two distinguishable participant roles. I consider the Mojeño Trinitario reflexive constructions to be intransitive: no object noun phrase ever occurs (recall that there is no set of reflexive pronouns in the language (§2.2), and only the subject is indexed on the verb with a person prefix. However, since noun phrases are optional and subject marking for 1st and 2nd person subjects do not differ depending on transitivity (§2.3), the transitivity analysis of individual sentences is often ambiguous at the surface level. Nevertheless, detransitivization is overtly marked when the subject is a 3rd person, because it is then always indexed with *t-*, as on intransitive verbs (and transitive verbs with a 1st or 2nd person object), see §2.3.

This section has described the uses of the middle marker *-wo* that can be considered to be reflexive, even though some of these are considered by other authors like Kemmer (1993) not to carry a true reflexive meaning, but rather some senses of the middle. Other middle uses of *-wo*, clearly distinct from the reflexive uses, are discussed in §5.

4 The expression of coreference situations other than between core participants

The preceding section has shown that the middle marker *-wo* is used to encode the coreference between two core participants. Coreference of two arguments other than the core participants is not usually marked with this marker in Mojeño Trinitario. This section inquires on how these situations can be encoded.

Non-core arguments are indexed by person prefixes. Person prefixes on nouns express their possessors, while person prefixes on prepositions express their object. These person prefixes can have either reflexive or non-reflexive interpretations. This indetermination is illustrated here for adnominal possession, and exemplified with the 3rd person prefix for a feminine possessor *s-* ‘her’. Obviously, the interpretation of coreference with the subject is excluded if the possessed noun is part of the subject noun phrase as in (20), or if the subject is not a 3rd person as in (21). In examples where the possessed noun is not the subject, and the subject is a 3rd person of the same gender/number, the referent of the possessor is interpreted as coreferential or not with the subject depending on the context. Most of the time, the context makes it transparent who is the referent of the possessor.¹² In example (22) from a text, the feminine possessor of the object

¹²Searching for all nouns carrying a 3rd person feminine possessive prefix in my corpus, there was no example the interpretation of which was in fact ambiguous.

is interpreted as coreferential with the subject, but in some other context (for example, if we knew that the referent of the subject does not own a recorder), it could refer to another feminine 3rd person. In (23), it is also clearly coreferential with the subject, given the context of utterance.¹³

- (20) *Ñi-ke=pripu=iji ñi s-imá.*
3M-be _like=CONC.MOT.IPFV=RPT 3M 3F-husband
'Her husband was coming.' [T20.044]
- (21) *Juiti v-naekcho-v=yore=po p-jo-ka s-emtone.*
today 1PL-start-MID=FUT=PFV DEM-NH-PROX 3F-work
'Today we are going to start her work.' [T04.001]
- (22) *Kope s-era'i-ko to s-ye'e gravadora.*
past_day 3F-leave-ACT ART.NH 3F-GPN recorder
'The other time, she_i left her_{i/j} recorder.' [T26.037]
- (23) *P-su 'seno t-ero=ri'i une s-ko-chane p-ñi s-imá=puka.*
DEM.F woman 3-drink=IPFV water 3F-vz-person DEM-M 3F-husband=DUB
'The woman_i drinks water with a man who might be her_{i/j} husband.'
[PathS.75]

There is a subtype of the reflexive construction using the middle marker *-wo* that encodes the coreference of the possessor of a noun with the subject: a noun expressing a body part is incorporated in a verb, which is reflexivized with the middle marker *-wo*, as in (24). There is another construction where the middle marker *-wo* helps interpreting the coreference of the adnominal possessor and the subject, but where the middle marker expresses grooming situation types, or self-affectedness, rather than reflexivity (for example, in (25), the woman is not literally plaiting herself, her body). This can be used whether the object is a body part (25) or not (26), and the clause is not detransitivized. In contrast, a lexical way to explicitly inform on the non-coreference with the subject is to use the adjective '*pona* 'other' (27).

- (24) *ñi t-yuk-pan-ne-ch-wo=o'i*
ART.M 3-touch-jaw-CLF.back-ACT-MID=IPFV
'the one who is pressing his cheeks' [T45.066]

¹³The speaker is describing a video stimulus on the expression of path, and does not know the two actors nor their personal relationship. This task is described in Vuillermet & Kopecka (2019).

- (25) *Su 'seno t-eja-ra-ko=o'i t-jigwaj-ji-ch-wo to*
 3F woman 3-sit-PLURACT-ACT=IPFV 3-plait-CLF.amorph-ACT-MID ART.NH
s-chutmoko.
 3F-hair
 ‘The woman is sitting and plaiting her hair.’ [PathM.12]
- (26) *T-vemju-ju-pew-cho-wo j-ma s-epkopewo.*
 3-take_off-RED-CLF.foot-ACT-MID DEM-NH.PL 3F-flipflop
 ‘She takes off her flipflop.’ [PathC.68]
- (27) *T-yusti-j-ko p-jo s-chutmoko su 'po-na 'seno.*
 3-cut-CLF.amorph-ACT DEM-NH.SG 3F-hair ART.F other-CLF.H woman
 ‘She cuts the hair of another woman.’ [Cut& BreakF.33]

As for obliques coreferential with the subject, the single inflectable preposition in the language takes a single person prefix paradigm, so that coreference cannot be marked in the obliques.¹⁴ In elicitation as in (28), a consultant made use of the unstressed restrictive clitic =(*ri*)*chu* ‘only, just, exactly’ on a prepositional phrase to create a contrast between two possible interpretations of the person prefix on the preposition. The restrictive marker¹⁵ does not in itself express coreference, but refines the identifiability of the referent by excluding alternative referents. The only morphological resource to mark the coreference of a peripheral participant is the combination of an applicative and the middle marker -*wo*, which marks the coreference of an object (the promoted oblique) and a subject. This is illustrated in (29) with the goal applicative -(‘)u, and had been illustrated in (19) with the benefactive applicative -(*i*)*no*.

- (28) *Su 'seno s-wachri-k=ri'i to charuji s-ye'e=yo /*
 3F woman 3F-buy-ACT=IPFV ART.NH food 3F-PREP=FUT /
s-ye'e=yore=richu.
 3F-PREP=FUT=RESTR
 ‘The woman has bought food for her/herself (lit. for her precisely).’
 [elicited]
- (29) a. *P-su 'seno t-semo s-ye'e.*
 DEM-F woman 3-be_angry 3F-PREP
 ‘The woman is angry with her.’ [elicited]

¹⁴ Most locative meanings are actually expressed through either verbs or relational nouns.

¹⁵ The restrictive marker =(*ri*)*chu* can be found on various parts of speech and is usually translated as ‘just, only, precisely’.

- b. *P-su 'seno t-sem-u-ch-wo=richu.*
DEM-F woman 3-be_angry-APPL-ACT-MID=RESTR
‘The woman is angry with herself.’ [elicited]

There is no means of marking coreference between two non-core arguments. Again, the restrictive clitic =*richu* can be used, at least in elicitation, to help the addressee interpret the potentially ambiguous reference of the person prefix (see 30).

- (30) *N-ime-ri-ch=ri'i su Maria et-na s-kuna*
1SG-show-PLURACT-ACT=IPFV ART.F Maria one-CLF.GNR 3F-image
s-ye'e / s-ye'e=richu.
3F-PREP / 3F-PREP=RESTR
‘I showed Maria a picture of her/herself only (lit. precisely her).’ [elicited]

Middle-marking is not used for coreference across clauses. The examples (31) and (32) show that there is no marking for coreference between an element of a complement clause (here the subject) and the subject of the matrix clause. In discourse, a set of focus suffixes combinable with pronouns only can be useful for reference tracking across sentences, like -*pooko* ‘the very same’ in (33).¹⁶

- (31) *Esu s-echo to ñ-epia-k=yore to peti.*
3F 3F-know ART.NH 3M-make-ACT=FUT ART.NH house
‘She knew that he was going to build a house.’ [elicited]
- (32) *Esu s-echo=po to s-joch-ra=yre to tapajo to*
3F 3F-know=PFV ART.NH 3F-close-EV.NMLZ=FUT ART.NH door ART.NH
peti.
house
‘She remembered to close the house door.’ [elicited]
- (33) *tyompo esu t-k-ijare=e'i... esu-pooko=tse=ro esu*
and.also 3F 3-vz-name=IPFV 3F-FOC=CONTRAST=UNQ 3F
tkijaree'i Dolorosa.
3-vz-name=IPFV Dolorosa
‘[Preceding text: But there are only two: the Carmen Virgin and the mother of God, Holy Mary], and also the one called... the very same one,

¹⁶There is a set of focus suffixes used on pronouns only: -*ji* illustrated in (45–46), -*koocho*, -*pooko* in (33), -*yo* and -*yumja*. They are used only on pronouns in core argument positions, but not in reflexive constructions.

the one called Dolorosa.’ [the speaker realizes that the Holy woman he wanted to add to his list was the same person than the preceding one]. [T25.141]

5 Other functions of the middle marker -wo

This section explores the functions of the middle marker -wo other than its reflexive use. It first lists the situation types for which the middle marker -wo is used. Then it lists the various semantico-syntactic changes produced in verbs stems by the use of -wo. Finally, the use of -wo on nominalizations is mentioned.

Middle situation types are events in which (a) the Initiator is also an Endpoint, or affected entity and (b) the event is characterized by a low degree of elaboration (Kemmer 1993: 243), excluding reflexive and reciprocal proper. Below is a list of the middle situation types encoded in Mojeño Trinitario with the middle marker -wo.

- the reflexive situation types (§3)
- some middle situation types: grooming, change in body posture, other body actions, translational motion and positionals (§3)
- prototypical reciprocal (34) and naturally reciprocal situation types (35)¹⁷
- cognition (36)
- emotion (37)
- and spontaneous events (38),¹⁸ including the expression of phases like ‘start’ in (39) or ‘end’

(34)	<i>Juiti v-yon=ñore v-echji-ri-k-wo=yre</i>	<i>na-e</i>
	<i>today 1PL-go=FUT 1PL-speak-PLURACT-ACT-MID=FUT 3PL-PREP</i>	
	<i>p-no-kro.</i>	

DEM-H.PL-POT.LOC

‘Today we are going to discuss with these.’ [T24.087]

¹⁷Kemmer (1993: 17; 96–97) defines these as follows: “The prototypical reciprocal context is a simple event frame expressing a two-participant event in which there are two relations; each participant serves in the role of Initiator in one of those relations and Endpoint in the other.” and “Naturally reciprocal events are actions or states in which the relationship among two participants is usually or necessarily mutual or reciprocal. This class includes verbs of fighting, embracing, meeting, greeting, conversing, and so forth.”

¹⁸A common example is the verb form *t-ekti-k-wo* [3-blown_hard-ACT-MID] ‘it blows hard’ used nominally with an article, *to tektikwo* ‘a strong wind’.

- (35) *Esu t-itu-ch-wo=yre=ripu=ini=ji.*
 3F 3-marry-ACT-MID=FUT=PFV=PST=RPT
 ‘It is said that she was about to get married.’ [T19.177]
- (36) *T-ponre-ri-k-wo=ripo.*
 3-think-PLURACT-ACT-MID=PFV
 ‘He is pensive/worried.’ [T40.154]
- (37) *N-yugiej-ko-wo.*
 1SG-make _uneasy-ACT-MID
 ‘I feel uneasy.’ [T38.040]
- (38) *T-si-'o-o=po to une.*
 3-be.much-ACT-MID=PFV ART.NH water
 ‘There had been a flood (lit. the water had been much).’ [T38.102]
- (39) *Juiti v-naekcho-v=yore=po to v-ye'e gravasion.*
 today 1PL-start-MID=FUT=PFV ART.NH 1PL-GPN recording
 ‘Today we are going to start our recording.’ [T30.001]

Finally, there are some cases where the event does not seem to fall within a situation type described as middle, but are instead typically one- or two-participant events. In these cases, there is some emphasis on the subject. Three types of functions have been observed:

- the subject is particularly affected as in (40)¹⁹
- the subject is fully involved in the activity, with verbs strongly involving the agent, and not necessarily for their own benefit, as in ‘do fast’, ‘look for’, ‘carry’, or ‘pull’ illustrated in (41)
- the subject is contrasted with other possible referents (42)²⁰

- (40) *Ene takepo v-era'i-k-wo=po v-ke=ripo una hora o dos horas.*
 and then 1PL-leave-ACT-MID=PFV 1PL-do.like=PFV one_or_two_hours
 ‘And then we left it for one or two hours (about a heavy load).’ [T25.004]

¹⁹See Creissels (2007) for a similar analysis of *se* verb forms in French involving no valency change.

²⁰The three vowels (/a/ of the prefix, /a/ of the irrealis prefix and the initial vowel of *itna* ‘be used to’) merge into a diphthong *ae*.

- (41) *T-chuu-ko-o=po to kareta to wiyo te to 'chene.*
 3-pull-ACT-MID=PFV ART.NH cart ART.NH OX-PL PREP.NH ART.NH
 path
 'The oxen pull the cart on the path.' [T28.057]
- (42) *N-itna, te p-jo-ka 'wósare wo'=richu na-(a)-etna-wo.*
 1SG-be_used PREP.NH DEM-NH.SG-PROX village NEG=RESTR
 3PL-IRR-be_used-MID
 'I am used to it, here in town they are not used to it.' [T34.049]

The middle uses have been up to now considered in terms of the situation types covered by this marker. The remainder of this section focuses on the various semantico-syntactic changes induced by the use of *-wo* in the argument structure of the verb root. Detransitivization with subject and object being coreferential has been discussed in §3 (the reflexive construction). The middle marker *-wo* involves four other types of detransitivization:

- decausative, as in (16) where the P participant is promoted as subject and the A is left unexpressed
- auto-causative, as in (17), where the subject has both A and P roles, but the action on oneself is not fully identical with the same action realized on some other participant
- antipassive with demotion of P as an oblique, as in (34) (the verb *echijiriko* 'speak to' normally takes the addressee as the object, but in (34) the addressee is encoded in a prepositional phrase, in what is called a discontinuous reciprocal construction)²¹
- antipassive with P deletion, as in (43) (the verb *issiko* 'whistle' can take an object for the addressee)

- (43) *T-issi-sio-k-wo=pri'i=ji.*
 3-whistle-RED-ACT-MID=CONC.MOT.IPFV=RPT
 'He was coming whistling.' [T6.093]

^{21^c}Discontinuous constructions are those in which the second reciprocant is a non-subject" (Ned-jalkov & Geniušienė 2007: 396).

Additionally, there are cases where no valency change is observed, on either transitive or intransitive verbs. First, a transitive verb affixed with *-wo* can remain transitive, as in (39) and (41) for instance where an object noun phrase follows the verb. Second, the middle marker *-wo* can be found on intransitive verbs, where it logically has no detransitivization effect either, as in (44).

- (44) *P-no po-mri-ono t-eja-ru-pue-k-wo-n=ri'i.*
DEM-PL other-CLF.group-PL 3-sit-?-CLF.ground-ACT-MID-PL=IPFV
‘The others are sitting all over the ground.’ [T46.011]

Finally, one observes the use of a sequence with *wo* on some other parts of speech than verbs. There are a few attestations of *wo* on pronouns, after a focus marker *-ji* as in (45). This *wo* could well be the middle marker, as it alternates in that position with the reciprocal marker *-k(o)ko* shown in (46).

- (45) *Nut-ji-wo m-ponre-ri-k-wo.*
1SG-FOC-MID 1SG-thing-PLURACT-ACT-MID
‘I have been thinking.’ [T43.029]
- (46) *Eno-ji-kko t-imkata-koko-no.*
3PL-FOC-RECP 3-help-RECP-PL
‘They both help each other.’ [elicited]

Also, a sequence *wo* is rather frequent after various nominalizers.²² Out of a small random list of 91 occurrences of *wo* on an item comprising a verb root, 9 are nominalized. I consider this *wo* to be the middle marker. In some examples, there is indeed a clear middle function, like the reciprocal one in (47). In others, it can simply be interpreted as antipassive, since the patient of the ‘fool’ event is left unexpressed and is interpreted generically (48). Since most nominalization processes are effectively reducing the valency of the affected clause, there is a logical link between nominalization and middle.

- (47) *to v-itu-ch-ra-wo*
ART.NH 1PL-marry-ACT-EV.NMLZ-MID
‘our marriage’ [T42.008]
- (48) *to na-kitem-ra'-wo*
ART.NH 3PL-fool-HAB.A.NMLZ-MID
‘their being tricksters’ [T6.021]

²²The location of the middle marker after the nominalizer may look surprising, but note that other verbal morphology like TAME occurs after nominalizers in Mojeño Trinitario, and that other Arawak languages also commonly show the sequence nominalizer + middle in that order, such as Yukuna (Lemus Serrano 2020).

6 The middle marker *-wo* among middle marking strategies

Mojeño Trinitario has many other strategies than the middle-marker *-wo* that participate in the middle domain. They are briefly presented in §6.1 and then the overall coverage of the middle domain is discussed in §6.2.

6.1 Mojeño Trinitario middle-marking strategies

Lability has been mentioned in §2.3, but four other markers compete with the middle marker *-wo* for the expression of either a low differentiation of A and P roles or demotion of one of these two roles.

First, there is a reciprocal marker, the verbal suffix *-koko* (*-kko* under syncope) used in the slot following that of the active suffix (see Figure 2).²³ It marks reciprocity between two core participants only, in prototypical reciprocal events, (49). Unlike the middle marker *-wo*, it is not used for naturally reciprocal events (see definitions in footnote 17). The reciprocal marker usually decreases the valency of the verb root: in (50), the verb is detransitivized, as is visible from the use of the semantically non-specific 3rd person subject prefix *t-*.

- (49) *V-echem-cho-kko=po.*
1PL-understand-ACT-RECP=PFV
'Now we understand each other.' [T24.131]
- (50) *Ene t-emna-kko-no t-ko-chicha-m=po.*
and 3-love-RECP-PL 3-vz-children-PL=PFV
'And they love each other and have children.' [T21.093]

Second, there is another middle marker, a prefix *ko-* immediately preceding the verb root (see Figure 2). It occurs only on transitive verb roots and detransitivizes them. When it is the only middle-marking device on a verb root, the verb does not carry the active suffix. Most of the time, it then shows some medio-passive meaning as in (51–52). The agent is usually not expressed (either unknown, generic or not individually important) and there is no hint of agency (expression of will, or purpose). I hypothesize that in those cases the meaning is resultative, which the absence of active morphology seems to support. It is however sometimes found with a passive function as in (53), but also with an autocausative meaning (54),

²³When the reciprocal is supposed to follow the *-ko* allomorph of the active suffix, only two *ko* syllables are realized. For glossing purposes, I consider in those cases that the reciprocal *-koko* then replaces the active suffix, as in (50).

a reflexive meaning (55),²⁴ a reciprocal one (56), on body actions like grooming (57), and on positionals (58).

- (51) *To letra, t-k-aju.*
 ART.NH letter 3-MID-write
 ‘The letters, they are written [on a T-shirt].’ [LocL.68]
- (52) *To vaka t-ko-ywa.*
 ART.NH meat 3-MID-grind
 ‘The meat is ground.’ [T25.045]
- (53) *P-su-ka powre 'chosi 'seno s-imoooro-o-ko=o'i to t-k-e'na=a'i.*
 DEM-F-PROX poor old woman 3F-watch-PLURACT-ACT=IPFV ART.NH 3-MID-hit=IPFV
 ‘This poor old woman, she watches them being hit.’ [T40.168]
- (54) *T-ko-yumrugi t-piko-vi=i'i.*
 3-MID-hide 3-be_scared-2SG=IPFV
 ‘He hid himself, he was scared of you.’ [T35.092]
- (55) *Eto v-k-epko-u.*
 3NH 1PL-MID-cover-APPL
 ‘We covered ourselves with it (lit. we put this over for ourselves).’ [about protecting oneselves from the cold with home-made blankets and hammocks] [T25.066]
- (56) *T-imo-ko-n=gierenko=o'i t-ko-komji-wko.*
 3-sleep-ACT-PL=CNT=IPFV 3-MID-embrace-CLF.amorph
 ‘They are sleeping, they are embraced.’ [T30.073]
- (57) *T-ko-sp-ugi-ono ta-ye'e.*
 3-MID-wash-CLF.face-PL 3NH-PREP
 ‘They wash their faces in it.’ [T20.026]
- (58) *T-ko-kojaru-ji te p-jo aramre.*
 3-MID-spread_out-CLF.amorph PREP.NH DEM-NH.SG wire
 ‘They are hanging on the barbed wire.’ [Answer to the question: Where are the clothes?] [LocC.037]

²⁴Out of context, this sentence could be interpreted as a medio-passive ‘we got covered with it’, but in the specific context of this biography, the subject plays both the A and P roles.

Third, there is a less frequent suffix *-si* that attaches to the verb in the slot after that of the active suffix (see Figure 2). The presence of the suffix *-si* has no effect on the presence of the active suffix: it neither deletes it as does the middle-marker *ko-*, nor forces its presence on those active verbs that do not always display it, as does the middle marker *-wo* (see §3.1). It is rare in discourse,²⁵ and attaches to transitive verbs as in (59–60). In these examples, even though the person prefixes *v-* and *ñ-* on verbs marked with *-si* refer to P, and the agent is expressed by a prepositional phrase introduced by the preposition *mue' ~ ñe*, the verb form does not seem to have been intransitivized: specific prefixes are used for 3rd person subjects, such as *ñ-* in (60). However, the suffix *-si* most often associates with the middle prefix *ko-*, as in (61–62). In these cases, the verb form looks detransitivized (see the non-specific 3rd person prefix *t-* in (61). The function is always clearly passive, and most of the time an agent can be identified (even though it is actually not usually expressed).

- (59) *V-icho-ri-k-si=po* *mue' ma viya.*
 1PL-call-PLURACT-ACT-PASS=PFV PREP.M ART.M Lord
 ‘We have been called by the Lord.’ [T24.061]
- (60) *Eñi t-wonokore ñ-imit-ko-si* *ñe ñi ñi-chicha.*
 PRO.M 3-obey 3M-teach-ACT-PASS PREP.M ART.M 3M-son
 ‘He was obeying, his son had taught him to be so. (lit. he had been taught by his son)’ [T19.164]
- (61) *Eto=ri'i t-k-ijro-ri-k-si* *te to Trinra.*
 PRO.NH=PFV 3-MID-sell-PLURACT-ACT-PASS PREP.NH ART.NH Trinidad
 ‘This was being sold in Trinidad’. [T25.033]
- (62) *P-a-k-kojcho-si, t-kojch-a-p=rine.*
 2SG-IRR-MID-scold-PASS 3-scold-IRR-2SG=RESTR
 ‘Be scolded, let her just scold you!’ [T37.087]

Finally, some middle situations are simply unmarked, like most changes in body posture like (63) and non-translational motions like (64).

- (63) *T-eja-k=po.*
 3-sit-ACT=PFV
 ‘He sat.’ [T42.055]

²⁵The suffix *-si* occurs in the text corpus without the prefix *ko-* in two examples only, (59) and (60).

- (64) *Ene n-epñu-k=po te wowlre.*
 and 1SG-turn-ACT=PFV PREP.NH left
 ‘And I turned to the left’. [elicited]

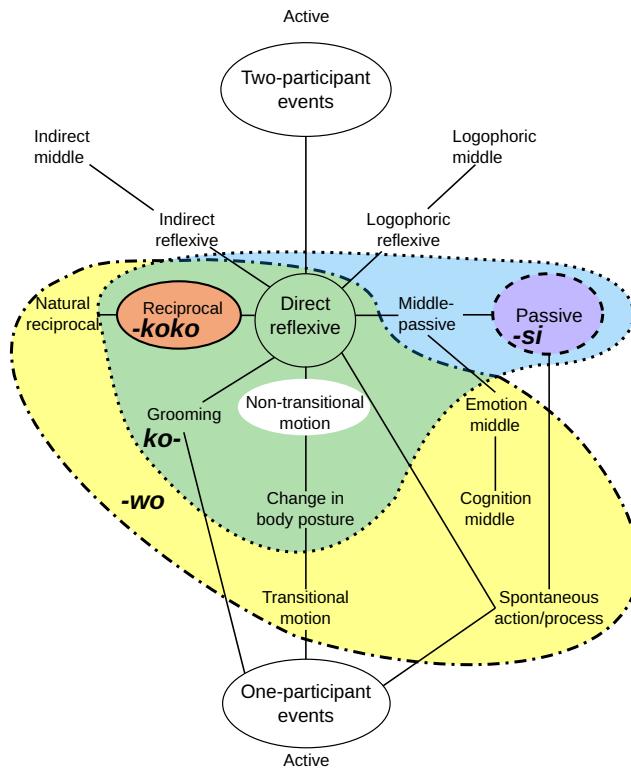
6.2 Mojeño Trinitario middle domain

The middle marker *-wo* that is used to mark reflexive constructions has a much wider extension than the other middle-marking strategies. It covers many of the situations types of the middle domain. The prefix *ko-* can also be considered to be a middle marker, and also has a wide extension covering a rare reflexive use, but its most frequent use really is the middle passive. Finally the two other markers are highly specialized, one as the reciprocal, *-koko*, and the other as a passive marker, *-si*. In the end, the Mojeño Trinitario middle domain is unusual in showing two true middle markers, whereas Kemmer (1993) was considering languages to have at best one middle marker. For a comparable situations in Bantu languages, Dom et al. (2017: 146) suggest to add a fourth type to Kemmer’s (1993) typology: multiple-form systems.

In such a system, multiple verbal morphemes cover different parts of the canonical middle, yet sometimes conveying meanings situated on the periphery of the canonical middle domain. In most Bantu languages, the semantic space of the middle voice seems to be organized along two domains, which can be qualified as agent-oriented vs. patient-oriented functions.

Such a complementary distribution does not obviously show for Mojeño Trinitario when looking at the distribution of the markers in Figure 4, but when the most frequent use of the two middle markers *ko-* and *-wo* are examined, then it is clear that *ko-* is more patient-oriented (uses to the right of the figure) than *-wo*. Middle *ko-* blocks the expression of activity on the verb and always demotes or deletes A, while middle *-wo* combines with stems marked for activity. A further remark is that the fact that non-transitional motion (called non-translational motion in the rest of Kemmer’s book and this paper) is always morphologically unmarked in Mojeño Trinitario contradicts its supposed intermediary position in Kemmer’s (1993: 222) typology.²⁶

²⁶A caveat that Kemmer (1993: 225) gives herself is that verbs of non-translational motion are rare in her data, so that there is no positive evidence that they follow the predictions of the semantic map in Figure 4.



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Figure 4: The middle domain in Mojeño Trinitario based on Kemmer 1993: 202

7 Conclusions

This paper started off by exploring the encoding of reflexive constructions, which make use of a marker *-wo*. Reflexive constructions are canonical: they are reduced to coreference between the two core arguments, and the valency of the verb root is decreased. The language shows neither coreferential person pronouns or indexes, nor any dedicated marker for the other types of coreference. Pronoun focus suffixes, the restrictive clitic and the middle marker *-wo* can be helpful in tracking referents, but they are not dedicated markers either. As is frequent cross-linguistically (Kemmer 1993), a marker used to encode reflexive situation types has a much wider use and can be considered a middle marker. Furthermore, the middle marker *-wo* is one of the few markers that cover the middle domain in Mojeño Trinitario. Within that domain, reflexivity is neither central, salient

nor really important. Not only is there no dedicated marker for reflexivity, but also the expression of reflexivity in discourse is not frequent: it is a minor use of middle -*wo* and a rare use of middle *ko-*, and is also expressed lexically by a few verb roots. The typologically most interesting aspects of the encoding of the middle-domain in this language are i) the semantic distribution of the various middle markers as illustrated in Figure 4, ii) the fact that two markers are best described as middle markers, which is not accounted for by the typology of middle systems (Kemmer 1993), and iii) the complex relationship of middle-marking strategies with the encoding of activity/stativity.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

ACT	active	HAB.A.NMLZ	habitual agent nominalizer
APPL	applicative	INDET	indeterminate
CNT	continuative	INTENS	intensifier
CONC.MOT	concomitant motion	M	masculine (singular)
CONTRAST	contrastive	MID	middle
COMPAR	comparison	NH	non-human
DM	discourse marker	PLURACT	pluractional
DERIV	derivative	POT.LOC	potential location
DIM	diminutive	PREP	preposition
DUB	dubitative	PRO	pronoun
EMP	empathy	RED	reduplication
EVAL	evaluative morphology	RESTR	restrictive
EV.NMLZ	event nominalizer	RPT	reportative
F	feminine (singular)	SP.P.NMLZ	specific patient nominalizer
GNR	generic	UNQ	unquestionable
GPN	generic possessive noun	VZ	verbalizer
H	human		

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Part VIII

Conclusions

Chapter 31

Crosslinguistic generalizations about reflexive constructions

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Reflexive constructions vary from language to language in the way they encode coreference between two clause participants. While some languages employ a form called reflexivizer, others use a non-reflexive form that may perform a coreference function under some conditions. There is also much variation in the types of reflexivizers, spanning from reflexive nominals, voice markers to argument markers, occurring in variable or invariant forms. Additionally, reflexivizers may display coexpression patterns related to self-intensification, auto-benefaction, or valency-changing operations. The aim of this chapter is to investigate some of the main features of reflexive constructions among the world's languages through a crosslinguistic comparison of the patterns described by the contributors of this book.

1 Introduction

Reflexive constructions have been widely studied, particularly in the European languages, and are known for their worldwide distribution.¹ The presence of a reflexivizer, i.e. a specialized marker used in reflexive constructions to express

¹Both authors participated equally in the analysis and typological interpretation of the data in this chapter. §2, §3.3, §3.4, §5.1 and §5.2 are attributed to Katarzyna Janic and §3.1, §3.2, §3.5, §4, and §5.3 to Nicoletta Puddu. All the remaining sections were written jointly.



coreference between two participants of the clause, is such a common phenomenon that many scholars hypothesize that reflexivity² is a universal concept (see Heine & Miyashita 2008). The first comprehensive treatment of this topic written from a functional-typological perspective was provided by Faltz (1985). Geniušienė (1987) written two years later also occupies an important position. The more recent publications are König (2007) and Kittilä & Zúñiga (2019).

Reflexivizers show significant morphological, syntactic, and semantic variation across languages. In the present chapter, we concentrate on their formal aspects, particularly on their morphological variation, leaving the discussion of the syntactic and semantic aspects of reflexivizers for future investigation. We build our analysis based on the data provided by the language specialists of the volume. The language sample is given in Table 1.³

The present chapter is organized as follows. In §2, we contrast languages with and without reflexivizers. In §3, we discuss Haspelmath (2023 [this volume])'s classification of reflexivizers in our sample. In §4, we elaborate on the two languages without reflexivizers. In §5, we explore the variation of reflexivizers, focusing, in particular, on their morphological aspects. In §6, we offer concluding remarks.

2 Presence vs. absence of the reflexivizer

Languages typically do not employ repetition of the same nominal in two argument positions to express coreference within the same clause. Therefore, sentences like *Tom saw Tom*⁴ are uncommon in the expression of coreference between the two participants of the clause. Instead, there is a strong tendency to use a special form labeled here “reflexivizer” (cf. Haspelmath (2023: §1 [this volume])), as in the English example *Mary saw herself*.

In many languages, including English, the reflexivizer is required whenever the patient argument of a typically “extroverted”⁵ verb is coreferential with the

²The term reflexivity has received different interpretations in the literature. It may refer to coreference in general, or more specifically to agent-patient coreference, or to the expression of other cases of coreference by a reflexive construction. See Puddu & Janic (2023 [this volume]) for a discussion.

³The proposed list of six macroareas is based on Hammarström & Donohue (2014).

⁴Excluding focus constructions.

⁵Since Haiman (1983: 803), the opposition between “introverted” and “extroverted” verbs has been variously characterized. Introverted verbs such as ‘wash’ define the action one generally performs upon oneself. In contrast, extroverted verbs like ‘kick’ refer to an action that one typically performs on somebody else. The introverted vs. extroverted distinction has been approached in the literature under different names. For instance, Kemmer (1993: 58) talks about “non-self-directed” vs. “self-directed” actions, while König & Siemund (2000: 58–60) introduce an opposition between “non-other-directed” and “other-directed” situations.

Table 1: Language sample

Ch.	Language	Family	Macroarea	Contributor(s)
3.	Bangime	Isolate	Africa	A. Hantgan
4.	Hausa	Afro-Asiatic	Africa	M. L. Abdoulaye
5.	Jóola Fóoñi	Atlantic-Congo	Africa	D. Creissels, A. C. Bassène
6.	Kambaata	Afro-Asiatic	Africa	Y. Treis
7.	Luganda	Atlantic-Congo	Africa	A. Witzlack- Makarevich, E. Just, S. Namyalo
8.	Mano	Mande	Africa	M. Khachaturyan
9.	Abaza	Abkhaz-Adyge	Eurasia	P. Arkadiev, S. Durneva
10.	Kazym Khanty	Uralic	Eurasia	A. Volkova, S. Toldova
11.	Polish	Indo-European	Eurasia	K. Janic
12.	Thulung	Sino-Tibetan	Eurasia	A. Lahaussois
13.	Early Vedic	Indo-European	Eurasia	V. Orqueda R. Pooth
14.	Yiddish	Indo-European	Eurasia	E. Luchina
15.	Chini	Lower Sepik-Ramu	Papunesia	J. Brooks
16.	Komnzo	Yam	Papunesia	C. Döhler
17.	Nungon	Nuclear Trans New Guinea	Papunesia	H. Sarvasy
18.	Walman	Nuclear Torricelli	Papunesia	L. Brown, M. Dryer
19.	Waray	Austronesian	Papunesia	T. E. Payne, V. Q. Oyzon
20.	Anindilyakwa	Gunwinyguan	Australia	M.E. van Egmond
21.	Jaminjung- Ngaliwurru	Mirndi	Australia	E. Schultze-Berndt
22.	Kuuk Thaayorre	Pama-Nyungan	Australia	A. Gaby
23.	Warlpiri	Pama-Nyungan	Australia	M. Laughren
24.	Zenzontepéc Chatino	Otomanguean	N. America	E. W. Campbell
25.	Hoocák	Siouan	N. America	J. Helmbrecht
26.	Oneida	Iroquoian	N. America	K. Michelson
27.	Yaqui	Uto-Aztecán	N. America	L. Guerrero
28.	Aguaruna	Chicham	S. America	S. Overall
29.	Kakataibo	Pano-Tacanan	S. America	R. Zariquey
30.	Mojeño Trinitario	Arawakan	S. America	F. Rose

agent argument in the local domain. This is a universal tendency, which has been widely observed and discussed in the literature (see e.g. Faltz 1985; Comrie 1999; Kazenin 2001; Dixon 2012). The use of the reflexive form is due to the relative unexpectedness of coreference between two arguments, which is related to our conceptualization of the world. Therefore, such an occurrence needs to be marked, unlike the cases that conform to our expectations, i.e. when the arguments denote different entities (Comrie 1999: 341). We can formulate Generalization 1, which is based on this cognitive account and agrees with Næss's (2007) theory of transitivity and maximal distinctness of participants:

Generalization 1: Languages encode coreference between the arguments of the same predicate through a special form because such situations are less expected. In contrast, situations in which the agent acts on the patient that is conceived as a distinct participant, are more common and hence more expected. Consequently, they do not need special encoding.

Based on previous studies, we expected most languages from our sample to follow Generalization 1. Our results corroborate this tendency (see Figure 1).⁶ Out of the 28 investigated languages in this volume, only two do not have a reflexivizer. These are Kazym Khanty (Uralic) from Eurasia (Volkova & Toldova (2023 [this volume])) and Zenzontepec Chatino (Otomanguean) from North America (Campbell (2023 [this volume])).

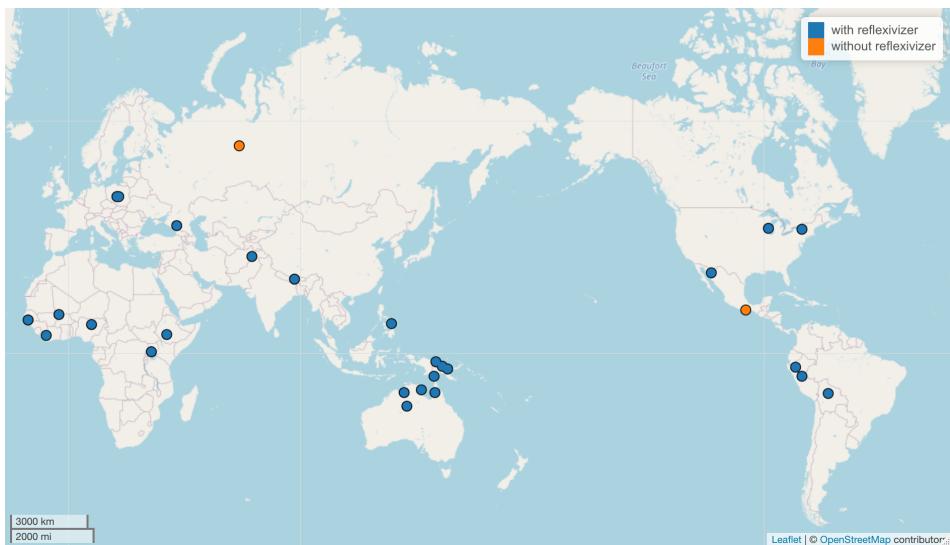
In what follows, we first elaborate on languages with a reflexivizer (§3) and then move on to languages without one, showing how Kazym Khanty and Zenzontepec Chatino deal with coreference (§4).

3 Languages with a reflexivizer

3.1 Classification of reflexivizers

Haspelmath (2023 [this volume]) distinguishes between three main types of reflexivizers: (i) reflexive nominals, (ii) reflexive voice markers, and (iii) reflexive argument markers. This classification is one of many proposed in the literature (see e.g. Faltz 1985; Dimitriadis & Everaert 2004; Dixon 2012). However, it differs from others in two important respects. Firstly, Haspelmath does not discuss reflexivizers in relation to language “strategies” or “techniques” applied for coreferential use but in terms of forms. Secondly, unlike other classifications building

⁶The maps in this chapter have been elaborated with the package “lingtypology” for R (Moroz 2017), using the language coordinates in *Glottolog* (Hammarström et al. 2022).



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Figure 1: Languages with and without reflexivizers

on the “nominal” vs. “verbal” distinction,⁷ this one is threefold. It introduces an in-between category, a “reflexive argument marker”, which is neither entirely nominal nor entirely verbal.

In the following subsections, we analyze the three types of reflexivizers introduced in Haspelmath (2023 [this volume]) in greater detail. In §3.2, we discuss the languages from our sample that have a reflexive nominal. In §3.3, we examine languages with a reflexive argument marker. In §3.4, we deal with languages with a reflexive voice marker. Finally, in §3.5, we consider reflexive forms that do not fall easily into one of the proposed categories. In doing so, we will propose new generalizations and discuss those already provided in the literature in the context of the new data.

⁷Beginning with Faltz (1985), the majority of the classifications of reflexive constructions are based on a “verbal” vs. “nominal” dichotomy. For instance, Dimitriadis & Everaert (2004) make a distinction between argumental vs. non-argumental reflexivizers, Kazenin (2001) contrasts “pronominal” with “verbal” strategies, and Dixon (2012) distinguishes a “pronoun technique” from a “verbal derivation technique”. See Puddu (2021: 377) for a succinct summary of these classifications.

3.2 Languages with a reflexive nominal

Haspelmath (2023 [this volume]) differentiates between various types of reflexive nominals. In addition to nouns with adpossessive person form, noun-like forms without adpossessive indexes, and reflexive pronominoids, he also mentions self-intensified anaphoric pronouns and anaphoric pronouns with other reinforcements.

Though the reflexive nominals in our sample are expectedly numerous, we do not have any example of anaphoric pronouns with other reinforcements. In Mano (Mande), the intensifier *diè* (deriving from the adjective ‘true’) can combine with both anaphoric and reflexive pronouns to form complex reflexive pronouns (Khachaturyan (2023: §4 [this volume])). In Kakataibo (Pano-Tacanan), the emphatic pronouns with *=bi* are used in a reflexive function only in ditransitive constructions. However, Zariquey (2023: §4.1 [this volume]) suggests that they cannot be considered true reflexives. For convenience, we treat nouns with adpossessive person forms and noun-like forms without adpossessive indexes as “reflexive nouns”. Consequently, in what follows, we discuss two subtypes of reflexive nominals: reflexive nouns (§3.2.1) and reflexive pronominoids (§3.2.2).

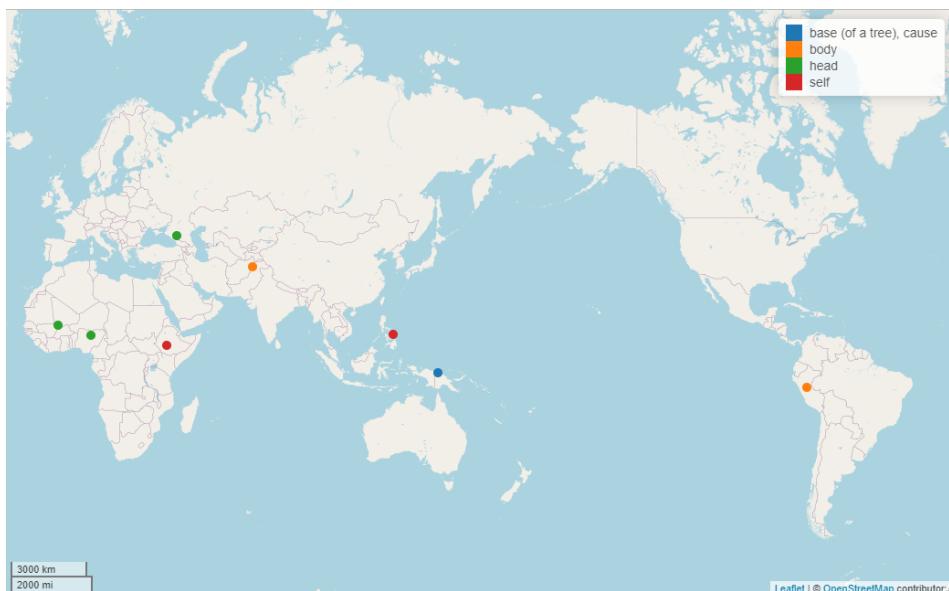
3.2.1 Reflexive nouns

Eight languages from our sample use a reflexive noun, which can be accompanied by an adpossessive person form. These are summarized in Table 2.

Table 2: Languages with a noun reflexivizer

	Language	Family	Macroarea	Form	Meaning
1.	Bangime	Isolate	Africa	<i>ñ=dēgè</i>	‘head’
2.	Hausa	Afro-Asiatic	Africa	<i>kâ-n-shì</i>	‘head’
3.	Kambaata	Afro-Asiatic	Africa	<i>gag-á-s</i>	‘self’
4.	Abaza	Abkhaz-Adyge	Eurasia	<i>j-qa</i>	‘head’
5.	Early Vedic	Indo-European	Eurasia	<i>svá- tanú</i>	‘body’
6.	Walman	Nuclear Torricelli	Paponesia	<i>mnon ein</i>	‘(tree) base’, ‘cause, reason’
7.	Waray	Austronesian	Paponesia	<i>íya</i> <i>kalugaríngon</i>	‘self’
8.	Kakataibo	Pano-Tacanan	S. America	<i>ain nami=bi</i>	‘body’

Reflexive nouns are present in various macroareas, as shown in Table 2. They are observed in Africa (i.e. Bangime: *ñ=dēgè* [3sg.B=head.3SG.POSS], Hausa: *kâ-n-shì* [self-of.M-3SG.M], Kambaata: *gag-á-s* [self-M.ACC-3M.POSS]) but also in Eurasia (i.e. Abaza: *j-qə* [3SG.M.IO-head], Early Vedic: (*svām*) *tanvām* [own.ACC.SG self.ACC.SG]), Papunesia (i.e. Walman: *mnon ein* [3SG.M.GEN tree/base/cause/reason], Waray: *iya kalugaríngon* [3SG.GEN self]), and South America (i.e. Kakataibo: *ain nami=bi* [3SG:GEN body:ABS=EMPH]). Figure 2 visualizes the geographical location of these languages.



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Figure 2: Languages with a noun reflexivizer

The most frequent lexical source for reflexive nouns in our sample are body-part terms.⁸ This observation remains in line with previous studies (see, e.g., Heine 2000; Schladt 2000; König et al. 2005; Evseeva & Salaberri 2018). However, reflexivizers derived from body parts represent 14% of our sample, which is considerably lower than what we find in previous studies. For instance, in Schladt (2000), 89 out of 148 languages derive reflexivizers from body parts (60%), while in König et al. (2005), it is 47 out of 62 (76%). This difference between previous studies and ours is clearly due to the different sampling strategy. While Schladt

⁸Our definition of the term body part also includes the ‘body’ as a whole. This remains in line with previous studies (see, among others, Heine 2000; König & Siemund 2000).

(2000) and König et al. (2005) only examine languages in which it was possible to find a lexical source of the reflexive marker, we opted for genealogical and geographical diversity in our language sample.⁹

Several studies have shown that the majority of body-part reflexivizers are found in the African macroarea (e.g. Heine 2000; Schladt 2000; and König et al. 2005). According to Heine (2000), the most common source for the body-part reflexivizer in Africa is ‘body’ itself. However, in our sample, two African languages use a reflexivizer derived from ‘head’. These are Bangime *dēgē* and Hausa *kai* (cf. Table 2). This discrepancy is probably owed to an areal phenomenon since the nominal reflexivizer ‘head’ is mainly concentrated in western and western-central Africa, where Bangime and Hausa are spoken (cf. Schladt 2000: 109–110; Heine 2000: 9; and Evseeva & Salaberri 2018). Incidentally, languages from other macroareas may also have a reflexivizer derived from ‘head’. Abaza from our sample illustrates this point. This language is spoken in the Caucasus, which is identified as a possible grammaticalization area of ‘head’ reflexivizers (cf. Schladt 2000: 108; Evseeva & Salaberri 2018: 395). Overall, the general frequency of ‘head’ reflexivizers in our sample is 11%, which aligns with the study by Evseeva & Salaberri (2018: 422).

Regarding other lexical sources of reflexive nouns (cf. Table 2), we also find nouns well-known from the previous literature (see Schladt 2000). These are ‘body’ in Early Vedic (*tanú-*) and Kakataibo (*nami*), and ‘self’ in Kambaata (*gag-á*) and Waray (*kalugaríngon*). Finally, we find a quite peculiar lexical source in Walman in the word *ein* whose principal meaning is ‘base (of a tree)’ but which can also mean ‘cause, reason’.

Reflexive nouns frequently occur with an adposessive form that can be either bound (preposed or postposed) or free. The same holds for our language sample. Haspelmath (2023: §6.1 [this volume]) suggests that when the possessive person form is bound, it is obligatory, while when it is free, it is optional. In our sample, Bangime, Hausa, Kambaata¹⁰ and Abaza confirm this observation since their possessive person form is bound and obligatory. The situation is more complex in languages with a free adposessive form since they show different degrees of obligatoriness of this form. For instance, in Kakataibo, the noun *nami* ‘body’ has to be

⁹We did not propose diachronic reconstructions for words supposedly deriving from body parts, since we did not ask the contributors for such data explicitly. However, some authors mention this point briefly. For instance, Treis (2023 [this volume]) points out that Kambaata, which is in close contact with Amharic (and possesses a nominal reflexivizer traced back to ‘head’), has the reflexivizer *gag-á* ‘self’, which cannot be traced back to ‘head’.

¹⁰However, in Kambaata the adposessive form can be omitted in a specific context, namely when the antecedent and the reflexive are impersonal or generic (see Treis (2023 [this volume])).

obligatorily accompanied by both the possessive pronoun *ain* and the emphatic marker *=bi*. In Walman and Waray, the possessive form in the possessive-indexed nominal construction is generally required. Regarding Walman specifically, the reflexivizer *ein* can be accompanied either by the genitive form of a pronoun or occur in a construction with an *and*-verb, where both conjuncts are pronominal. As for Waray, the noun *kalugaríngon* is usually preceded by a genitive pronoun, or, less frequently, by the post-nominal and enclitic genitive pronoun (which is the most typical form for the possessed nominal). In a limited number of cases, *kalugaríngon* can appear without possessor, as shown in (1). According to Payne & Oyzon (2023 [this volume]), the possessive form does not appear because the 1st person forms may be omitted when the speaker's intention is clear.

- (1) Waray (Austronesian; Payne & Oyzon (2023 [this volume]))

Ako na-hipausa ha kalugaríngon.
1SG.ABS R.SPON-astonish LOC self
'I was astonished at myself.'

Finally, in Early Vedic, the noun *tanú-* 'body' can, but does not have to, be used in the reflexive function with the adposessive form *sva-*. Even if *tanú-* and *svá-* *tanú-* are not used in complementary distribution, the compound strategy is used mostly for partial coreference and in indirect reflexive constructions¹¹ (cf. Orqueda & Pooth (2023: § 2.2.2 and 2.3.1 [this volume])).

Given the above, we propose Generalization 2.

Generalization 2: If a language has a reflexivizer composed of a nominal and bound possessive person form, the possessive is obligatory.

Generalization 2 can also be represented in the form of a contingency table, as shown in Table 3.

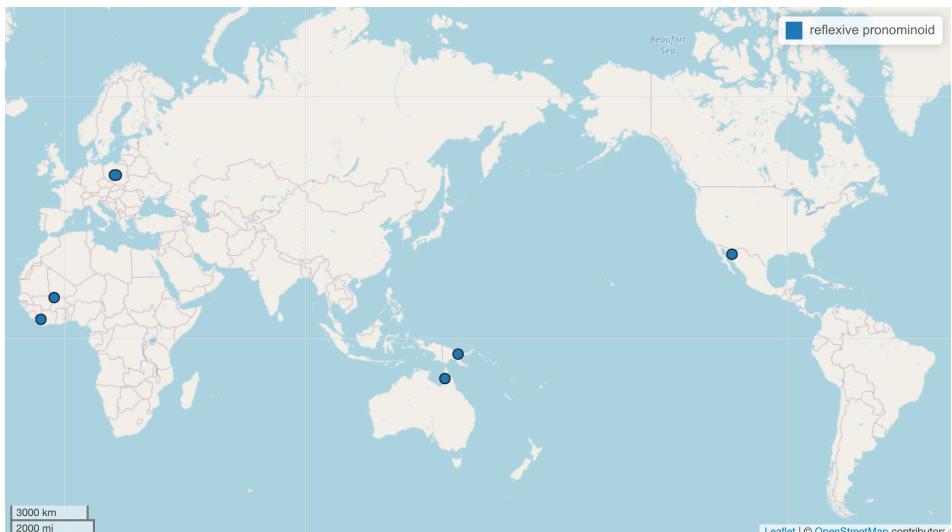
Table 3: Generalization 2

Adposessive form	Obligatory	Optional
bound	+	-
free	+	+

¹¹Kemmer (1993: 36) defines an indirect reflexive construction as a three-participant event with a recipient or beneficiary coreferential to an agent.

3.2.2 Reflexive pronominoids

Reflexive pronominoids are well represented in our sample. They originate from different areas of the world, as shown in Figure 3.¹² These results stand in opposition to Haspelmath (2023: §6.4 [this volume])’s impressionistic observation that reflexive pronominoids are rare in the languages of the world.



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Figure 3: Languages with a reflexive pronominoid

Table 4 illustrates the reflexive pronominoid for the 3rd person singular. In some cases, the reflexive pronominoid has an inflectional paradigm that is completely parallel to personal pronouns, as in Bangime, Yaqui or Polish, while in other cases, e.g. Yiddish, the same form is used for all persons and numbers. Additionally, we distinguish several in-between cases, discussed in detail in §5.2.

3.3 Languages with a reflexive argument marker

It is crosslinguistically well-observed that a reflexive form and object person index present some distributional similarities. They share the same paradigmatic slot in which they cannot cooccur. Given the above, Haspelmath (2023 [this volume]) introduces a new type of reflexivizer called “reflexive argument marker”

¹²Note that the two cases from Europe, Polish and Yiddish are derivatives of the same Proto-Indo-European root *se-/s(e)we-.

Table 4: Languages with a reflexive pronominoid

Language	Family	Macroarea	Form
1. Bangime	Isolate	Africa	<i>mī̄</i>
2. Mano	Mande	Africa	<i>ē</i>
3. Polish	Indo-European	Eurasia	<i>siebie</i>
4. Yiddish	Indo-European	Eurasia	<i>zikh</i>
5. Nungon	Nuclear Trans-New Guinea	Papunesia	<i>ino</i>
6. Kuuk Thaayorre	Pama-Nyungan	Australia	<i>nhangnul</i>
7. Yaqui	Uto-Aztecan	N. America	<i>au, emo, omo</i>

based on the criterion “occurring in the same slot” as the argument marker. Considering the novelty of this concept, it should be noted that none of the authors of our volume explicitly used this term when characterizing the reflexivizer in the language of their specialization. Rather, they focus on its inflectional and derivational properties. In what follows, we will look at this new concept in the context of our data, providing particularly clear examples of reflexive argument markers (§3.3.1). We subsequently raise the question of the applicability of the proposed criterion in the context of crosslinguistic investigation and language-specific description (§3.3.2).

3.3.1 Reflexive argument markers as an independent category

Reflexive argument markers differ from reflexive nominals in that they cannot occur in isolation. They also differ from voice markers in that they do not occur in the same paradigmatic slot. By contrast, they occupy the same slot as a person index in the verbal template. Languages whose reflexivizer fulfills the criterion of “occurring in the same slot” as the person index are listed in Table 5.

The criterion of occurring in the same slot is based on a formal aspect of reflexive constructions. Depending on the type of analysis, such an approach presents advantages or raises some issues. For crosslinguistic comparison, this criterion is very convenient as it is relatively easily applicable across languages and does not require the consideration of specific features of a reflexive construction.

In Luganda, the reflexive prefix *ee-* immediately precedes the verbal stem, occupying the object slot of the verb. Compare (2a) with (2b). By contrast, all voice markers are suffixes in Luganda. Hence, they occur after the verbal stem.

Table 5: Languages with a reflexivizer that alternates with bound person forms in the same slot

Language	Family	Macroarea	Form
1. Luganda	Atlantic-Congo	Africa	<i>ee-</i>
2. Abaza	Abkhaz-Adyge	Eurasia	<i>čə-</i>
3. Polish	Indo-European	Eurasia	<i>się</i>
4. Walman	Nuclear Torricelli	Papunesia	<i>r-</i>
5. Warlpiri	Pama-Nyungan	Australia	<i>=nyanu</i>
6. Aguaruna	Chicham	S. America	<i>-m(a)/-mam(a)</i>
7. Mojeño Trinitario	Arawakan	S. America	<i>-wo</i>

(2) Luganda (Atlantic-Congo; Witzlack-Makarevich et al. (2023 [this volume]))

a. *Neewalana.*

n-**ee**-walan-a
1SG.SBJ-REFL-hate-FV
'I hate myself.'

b. *Abakazi bampalana.*

abakazi ba-**n**-walan-a
women(2) 2.SBJ-1SG.OBJ-hate-FV
'Women hate me.'

A comparable situation is observed in Abaza. The reflexive prefix *čə-* appears in the absolute slot (3a) where it alternates with the bound person form (3b).

(3) Abaza (Abkhaz-Adyge; Arkadiev & Durneva (2023 [this volume]))

a. *čə-j-χʷə-t̪*

REFL.ABS-3SG.M.ERG-injure(AOR)-DECL
'He injured himself.'

b. *sə-j-χʷə-t̪*

1SG.ABS-3SG.M.ERG-injure(AOR)-DECL
'He injured me.'

Even though the reflexive argument indexes may not be easily distinguishable from reflexive voice markers in some languages (cf. Haspelmath (2023: 5.3 [this

volume))), this is not the case of *čə-* in Abaza. Arkadiev & Durneva (2023 [this volume]) point out that the reflexive prefix *čə-* cannot be considered a valency-reducing device because the ergative prefix of the verb is fully compatible with *čə-*, as shown in (3a) above and (4).

- (4) Abaza (Abkhaz-Adyge; Arkadiev & Durneva (2023 [this volume]))

čə-z-dər-əj-t

REFL.ABS-1SG.ERG-know-PRS-DECL

'I know myself.'

In some languages, the opposition between the reflexive argument indexes and object person indexes is more easily visible in oblique position. In Warlpiri, in object position, coreference is expressed by the enclitic reflexivizer =*nyanu*, while disjoint reference is zero-marked. Compare (5a)¹³ and (5b). The alternation between reflexive and non-reflexive enclitic forms is, however, more evident when there is coreference between subject and indirect object arguments. Examples (5c–5d) illustrate this point: the enclitic reflexivizer =*nyanu* in (5c) expresses coreference, while the dative clitic in (5d) expresses disjoint reference.

- (5) Warlpiri (Pama-Nyungan; Laughren (2023 [this volume]))

- a. *Paka-rnu=nyanu_i wati-ngki_i* (**nyanungu_{i/j}*).
hit-PST=ANAPH man-ERG 3

'The man_i hit himself_{i/*j}.'

- b. *Paka-rnu wati-ngki_i* (*nyanungu_{i/j}*).
hit-PST man-ERG 3

'The man_i hit him_{i/j}/her/it.'

- c. *Wangka-ja=lpa=nyanu wati_i* (*nyanungu_{i/j}-ku*).
say-PST=IPFV=ANAPH man 3-DAT

'The man_i spoke to himself_{i/*j}.'

- d. *Wangka-ja=lpa=rла_{i/j} wati_i* (*nyanungu_{i/j}-ku*).
say-PST=IPFV=3DAT man 3-DAT

'The man_i spoke to him_{i/j}/her.'

Classifying the reflexive form as an argument marker is not always as straightforward as in Luganda, Abaza, or Warlpiri. In some languages, the "same slot

¹³Free pronouns coreferential with corresponding bound pronouns in Warlpiri mark a contrastive focus or emphasize a topic function (see Laughren (2023 [this volume])).

criterion” is problematic because different object indexes occur in different slots (cf. Haspelmath (2023: §5.3 [this volume])), as in Walman. In this language, the reflexive-reciprocal prefix *r-*, which is used for all persons and illustrated in (6a), appears in the same slot as the 1st (cf. 6b) and 2nd person object pronouns. Given that the criterion of the same slot is met, we can recognize the prefix *r-* as a reflexive argument marker. However, the 3rd person object appears as a suffix in (6c). Consequently, we cannot state that the reflexivizer in (6a) contrasts with the person object pronoun in (6c) in the same slot.

- (6) Walman (Nuclear Torricelli; Brown & Dryer (2023 [this volume]))
- a. *Runon n-r-eni* *Matthew.*
3SG.M 3SG.M-REFL/RECP-call Matthew
'He calls himself Matthew.'
 - b. *Runon n-p-eni* *kum Amos.*
3SG.M 3SG.M-1OBJ-call 1SG Amos
'He called me Amos.'
 - c. *Kum m-enie-n* *runon Amos.*
1SG 1SG-call-3SG.M 3SG.M Amos
'I called him Amos.'

3.3.2 A comparative criterion and language specific properties

Some languages are on the borderline between a reflexive voice marker and a reflexive argument marker, opening a discussion about to what extent we can compare languages without considering language-specific properties. There are three languages in our sample in which, according to the authors, the reflexivizer functions as a voice marker, even if it meets the “same slot criterion”. These are Aguaruna, Polish, and Mojeño Trinitario. The reflexive form of these languages additionally modifies the morphosyntactic properties of the construction or demonstrates characteristics typical of voice markers.

Regarding Aguaruna, examples (7a–7b) leave no doubt that the reflexive form *-ma* alternates with the object marker in the same position. Both follow the root immediately and precede the aspectual marker. Consequently, *-ma* can be identified as a reflexive argument marker from a comparative perspective.

- (7) Aguaruna (Chicham; Overall (2023 [this volume]))

- a. *tsupíŋmakmi*
tsupi-hama-ka-mi
cut-2.OBJ-PFV-RECPST.3.DECL
'he has cut you' (Overall 2017: 307)
- b. *tsupímakmi*
tsupi-ma-ka-mi
cut-REFL-PFV-RECPST.3.DECL
'he has cut himself' (Overall 2017: 307)

However, Overall (2017: 306) (and also Overall (2023 [this volume])) characterizes *-ma* as a voice marker based on a language-specific criterion, namely the comparison with an overt object NP. While the reflexive form *-ma* cannot occur with overt object NPs, this is not the case with the verbal object markers (Overall 2017: 293, Overall (2023 [this volume])).

Polish is another case in point. In this language, the reflexive clitic form *się* occupies the same position as the personal pronoun. Compare (8a) and (8b). Consequently, we can treat this form as a reflexive argument index.

- (8) Polish (Indo-European; Janic (2023 [this volume]))

- a. *Kasia bronи się.*
Kasia.NOM defend.PRS.3SG SELF
'Kasia defends herself'
- b. *Kasia bronи ja.*
Kasia.NOM defend.PRS.3SG SG(F).ACC
'Kasia defends her'

However, *się* shows detransitivisation (antipassive) effects, as illustrated in (9).

- (9) Polish (Indo-European; Janic (2023 [this volume]))

- a. *Chłopiec chwycił galążę.*
boy.SG(M).NOM grab.PST.3SG(M) branch.SG(F).ACC
'The boy grabbed the branch.' OR: 'The boy grabbed the branch (to hold onto it)'.
- b. *Chłopiec chwycił się galęzi.*
boy.SG(M).NOM grab.PST.3SG(M) SELF branch.SG(F).GEN
'The boy grabbed the branch (to hold onto it).' (Janic 2016: 176–177)

The coding properties of the object ‘branch’ in (9b) differ from those in (9a). The syntactically demoted object is no longer coded like a core argument because it carries an oblique (i.e. genitive) case. Janic (2023 [this volume]) analyzes the reflexive form *się* as a voice marker that modifies the syntactic valency of the verb. Insisting that *się* is a reflexive argument marker would imply recognizing the homonymy between *się* in (9b) and *się* in (8a). The fact that there is a continuum between the reflexive and other middle-type uses of *się* suggests that *się* can be considered as a highly polysemous marker with detransitivization effects rather than as an illustration of homonymy (cf. Geniušienė 1987; Kemmer 1993; Creissels 2006: §22.2.1).

Finally, in Mojeño Trinitario, the suffix *-wo* is external to the stem and appears in the same slot as object suffixes, as shown in (10a–10b) respectively.

- (10) Mojeño Trinitario (Arawakan; Rose (2023 [this volume]))

- a. *t-im-it-ko-wokovi*
3-CAUS-know-ACT-1PL
'He teaches us.'
- b. *n-imoooro-k-wo*
1SG-watch-ACT-MID
'I am looking at myself.'

Rose (2023 [this volume]) considers *-wo* as a valency operator: it is invariant and shows detransitivization effects on the verbal stem. This becomes visible when we observe the encoding of the subject argument. Similarly to intransitive verbs, reflexive verbal forms with *-wo* use the non-specific prefix *t-* to encode the 3rd person subject.¹⁴ Compare ‘sit’ and ‘plait’ in (11).

- (11) Mojeño Trinitario (Arawakan; Rose (2023 [this volume]))

- su 'seno t-eja-ra-ko=o'i t-jigwaj-ji-ch-wo to*
3F woman 3-sit-PLURACT-ACT=IPFV 3-plait-CLF:amorph-ACT-MID ART.NH
s-chutmoko
3F-hair
'The woman is sitting and plaiting her hair.'

¹⁴In Mojeño Trinitario, 1st and 2nd person objects are indexed on the verb through suffixes. With all intransitive verbs and with transitive verbs with a 1st or 2nd person object, a non-specific 3rd person subject prefix *t-* is used, as in (10). When a transitive verb has a 3rd person object, a specific subject prefix must be used.

Moreover, *-wo* shares some properties with stem-internal affixes like triggering the active suffix on those active verbs which do not normally show it (see Table 3 in Rose (2023 [this volume])). This unusual property favours treating *-wo* as a valency operator rather than as an argument marker.

Given the above, Aguaruna, Polish, and Mojeño Trinitario represent problematic cases for a crosslinguistic comparison if we want to typologize their reflexivizers based on the formal criterion of occurring in the same slot as argument indexes. On a more advanced level, these languages raise a crucial question of how to balance crosslinguistic comparison without losing language-specific particularities, which we leave open for the moment (but see e.g. Bickel 2010, 2011; Haspelmath 2010, 2016 for a discussion). Considering, however, that we carry out our analysis from a comparative perspective, we find it more legitimate to consider the reflexive forms of Aguaruna, Polish, and Mojeño Trinitario as reflexive argument markers.

3.4 Languages with a reflexive voice marker

A fair number of languages, in general, and in our sample in particular, signal coreference of the two main clause participants through a reflexive voice marker, i.e. a verbal affix. This observation holds for 11 out of 26 languages from our sample and is attested in all macroareas. See Table 6.¹⁵

Some languages have more than one reflexive voice marker. Out of the 14 languages in Table 6, ten express coreference between the agent and patient argument using one voice marker. Four languages have more than one voice marker. These are Jóola Fóoñi, Kuuk Thaayorre, Oneida and Kakataibo. While Jóola Fóoñi uses three voice markers, the descriptions of Kuuk Thaayorre, Oneida and Kakataibo report two. The presence of several reflexive voice markers is crosslinguistically atypical but not extremely rare (see e.g. Dom et al. 2017 for a

¹⁵We include the Oneida reflexive forms *-at-* and *-atat-* in Table 6 because they are the verbal affixes that do not contrast with object indexes in the same verbal slot. Besides, from a crosslinguistic perspective, some of their functions are comparable to the ones performed by the reflexive voice marker in other languages. For instance, the semi-reflexive *-at-* can express anti-causative or autobenefactive function. However, it should be stressed that *-at-* and *-atat-* are not considered as a voice marker in the language. Building on Michelson (2023 [this volume]), there is no voice category in the verbal inflectional paradigm of Oneida, hence treating *-at-* and *-atat-* as equivalent of voice is only legitimate from a crosslinguistic perspective. Table 6 includes Polish, Aguaruna, and Mojeño Trinitario whose reflexivizers are explicitly considered by the authors as voice or valency-changing operators based on language-specific properties (see languages 12–14 in Table 6). This is because in this section we deal with voice-related issues such as encoding transitivity/intransitivity.

Table 6: Languages with a reflexive voice marker

	Language	Family	Macroarea	Form
1.	Kambaata	Afro-Asiatic	Africa	- <i>aqq/-'</i>
2.	Jóola Fóoñi	Atlantic-Congo	Africa	- <i>ɔɔr</i> , - <i>ɔ</i> , - <i>ɔɔrɔ</i>
3.	Thulung	Sino-Tibetan	Eurasia	- <i>sit</i>
4.	Early Vedic	Indo-European	Eurasia	middle endings
5.	Chini	Lower Sepik-Ramu	Papuonesia	<i>nji-</i>
6.	Anindilyakwa	Gunwinyguan	Australia	- <i>jungwV</i>
7.	Jaminjung/ Ngaliwurru	Mirndi	Australia	- <i>ji</i>
8.	Kuuk Thaayorre	Pama-Nyungan	Australia	- <i>e</i> , - <i>rr</i>
9.	Hoocák	Siouan	N. America	<i>kii-</i>
10.	Oneida	Iroquoian	N. America	- <i>atat</i> -, - <i>at</i> -
11.	Kakataibo	Pano-Tacanan	S. America	- <i>akat</i> , - <i>t</i>
12.	Polish	Indo-European	Eurasia	<i>siɛ</i>
13.	Aguaruna	Chicham	S. America	- <i>m(a)/-mam(a)</i>
14.	Mojeño Trinitario	Arawakan	S. America	- <i>wo</i>

discussion of the middle voice category in Bantu languages) and has an impact on the distribution of the functions performed by these markers.

Reflexive voice markers are frequently regarded as derivational rather than inflectional (cf. Haspelmath (2023: §5.2 [this volume])), but see also Dixon 2012: 172), mainly because they are not as general as inflectional forms. The latter are often considered highly general because they attach to all lexemes in their class. In contrast, derivational markers are less general as they do not attach to a substantially high number of bases. Moreover, derivational markers also tend to occur closer to the verbal root than inflectional markers and can be unproductive or subject to lexical restrictions. We can also observe this in the languages in our sample. Apart from Early Vedic, in all other languages, the reflexive voice marker is derivational (see Table 6).

Reflexive voice markers modify the syntactic transitivity of the verb. They attach to a transitive verb and derive an intransitive one. The latter takes the A argument of the corresponding transitive construction and encodes it as a subject of the derived verb. The intransitive status of the derived reflexive construc-

tion may be clear from the encoding properties of the arguments. For instance, in Jaminjung/Ngaliwurru, the detransitivizing effect of the reflexive form can be observed in the selection of the person prefix paradigm. When the reflexivizer suffix *-ji* attaches to a morphologically transitive verb, which indexes both subject and object, it results in a morphologically intransitive verb inflected with only a subject index. Example (12) illustrates this contrast.

- (12) Jaminjung/Ngaliwurru (Mirndi; Schultze-Berndt (2023 [this volume]))

- a. *gani-wa*
3MIN>3MIN-bitE.PST.PFV
'it bit him/her'
- b. *ga-wirri-ja*
3MIN-bitE-REFL.PST.PFV
'he/she/it bit himself/herself/itself'

A similar situation occurs in Anindilyakwa. In this language, the reflexive voice marker *-jungwV* attaches to transitive verbs, reducing their syntactic valency by one. We can observe this in (13). In (13a), the transitivized verb *-ngamba-* 'bathe' selects two arguments, the agent 'woman' and the patient 'dress', both indexed on the verb by the subject *yingə-* and object *ma-* pronominal prefixes, respectively. In (13b), these arguments are coreferential. Consequently, only the agent is indexed on the verb by the subject pronominal form *yingə-*.

- (13) Anindilyakwa (Gunwinyguan; van Egmond (2023 [this volume]))

- a. *dhə-dharrəngka yingə-ma-ngamba-ju-wa dhərija*
3F-female 3F-VEG-bathe-CAUS-PST dress(VEG)
'the woman washed her dress'
- b. *dhə-dharrəngka yingə-ngamba-ja-jungu-na*
3F-female 3F-bathe-CAUS-REFL-PST
'the woman washed herself'

Kakataibo makes a rigid division between transitive and intransitive verbs. Transitivity is a lexical property of a verb signalled through indexation and transitivity harmony. Therefore, the reflexive marker *-akat* can only attach to transitive and ditransitive stems, which become grammatically intransitive, as can be seen in (14a–14b).

- (14) Kakataibo (Pano-Tacanan; Zariquiey (2023 [this volume]))

- a. *Juan=nën ka ain kamon*
 Juan=ERG NAR:3 3:POS dog:ABS
bë-man-bëtsin-a-x-a
 eyes-touch-coming:TR-IPFV-3-NON.PROX
 ‘Juan touched his dog in the eyes, while coming.’
- b. *kaisa uni ëëëëëëë ki-i kaisa*
 NAR:REP:3 person:ABS ëëëëëëë say:INTR-S/A>S:SE NAR:REP:3
bë-man-akat-akë-x-ín
 eyes-touch-REFL-REM.PST-3-PROX
 ‘It is said that the man touched himself in his eyes saying “ëëëëëëë”.

In (14a), the predicate ‘touch’ takes the associated motion suffix *-bëtsin* ‘coming’, which occurs exclusively with transitive verbs. Additionally, the agent and patient arguments, *Juan* and *kamon* ‘dog’, are encoded transitively, i.e. they take the ergative and absolute marking respectively. By contrast, in the reflexive construction in (14b), the agent argument ‘person’ is encoded like the subject of intransitive verbs as it occurs in the absolute form. Moreover, the motion suffix *-bëtsin* ‘coming’ is no longer compatible with the verbal predicate ‘touch’, as the latter now occurs with the reflexive form *-akat*.

Finally, Oneida illustrates a complex interaction between reflexivizers, transitivity and animacy. The language has two reflexivizers, the reflexive prefix *-atat-* and the semi-reflexive prefix *-at-*, and three classes of pronominals (transitive, agent and patient), whose distribution varies depending on the animacy of the verb arguments. On the one hand, verbs with two semantic arguments are inflected with portmanteau-like prefixes. They express the proto-agent and the proto-patient¹⁶ marked for gender, number, and person, as *hi-* in (15a). On the other hand, verbs with one animate argument use a different set of pronouns, either agent or patient (mainly according to semantic criteria, see Koenig & Michelson 2015 for an extensive discussion) to encode the animate argument irrespective of whether these verbs are monadic (or monovalent), as in (15b), or dyadic (or bivalent) with an inanimate patient, as in (15c). The reflexivizers *-atat-* and *-at-* are placed between the pronominal prefix and the verb root referring to the single distinct animate argument and the verb, as in (15d–15f). However, while *-atat-* always occurs with the agent paradigm of pronominal prefixes as in (15d), *-at-* can occur with either the agent (15e) or the patient (15f) paradigm.

¹⁶For the notion of proto-agent and proto-patient as semantic roles not being limited to canonical agent and patient see Dowty (1991) and Michelson (2023 [this volume]).

- (15) Oneida (Iroquoian; Michelson (2023 [this volume]))

- a. *wahinú·lyahke?*
wa-hi-nuhlya?k-e?
FACT-1SG>3M.SG-hurt-PNC
'I hurt him'
- b. *waha·yé·*
wa-ha-ye-?
FACT-3M.SG.A-wake.up-PNC
'he woke up'
- c. *wa?káhsehte?*
wa?-k-ahseht-e?
FACT-1SG.A-hide-PNC
'I hid it'
- d. *wahatatnú·lyahke?*
wa-k-atat-nuhlya?k-e?
FACT-1SG.A-REFL-hurt-PNC
'I hurt myself'
- e. *wa?katáhsehte?*
wa?-k-at-ahseht-e?
FACT-1SG.A-SEMIREFL-hide-PNC
'I hid'
- f. *yakotya?tahsluní*
yako-at-ya?t-a-hsluni
3FI.P-SEMIREFL-body-JOIN-dress,prepare[stv]
'she is all dressed up'

Moreover, as Michelson (2023 [this volume]) points out, the semi-reflexive *-at-* can change the semantic role of one of the arguments of the verb, sometimes unpredictably (as with, for instance, *-hloli-* 'tell someone something', *-athloli-* 'talk about someone or something').

According to Dixon (2012: 172), when a reflexive voice marker results from a derivational process applied to a verb, it tends to be realized as a suffix or prefix (but see the reflexive template in Döhler (2023 [this volume]) or reflexive/reciprocal circumfix *k(a)-...-ti* in Cavineña, Guillaume 2008). This observation also holds for our data. We note a dominance of reflexive voice markers occurring as suffixes. Only three languages instantiate their voice marker as a prefix. These are

-*at*, -*at-* in Oneida, shown in (15), *nji-* in Chini, shown in (16), and *kii-* in Hoocąk, shown in (17).

- (16) Chini (Lower Sepik-Ramu; Brooks (2023 [this volume]))

ani ñimiñji ninjikavi.
ani ñimiñji ni=nji-ki-avi
 3SG black INS=MID-propel-TLOC.R.PC
 ‘He painted himself black.’

- (17) Hoocąk (Siouan; Helmbrecht (2023 [this volume]))

hakijáŋq
ha<Ø>ki-já=nq
 <SBJ.3SG>REFL-SEE=DECL
 ‘he₁ sees himself’

Another characteristic of reflexive voice markers is that their form can vary when encoding verbal features. This leads to the invariant vs. variable opposition. While Thulung in (18) is considered to have an invariant reflexive voice marker, the reflexive voice marker of Jaminjung/Ngaliwurru (19) is variable. Regarding the latter, compare (19a) with (19b).

- (18) Thulung (Sino-Tibetan; Lahaussois (2023 [this volume]))

go səl-si-ŋu-mim tsʌŋra tel-ka klə:-si-ŋu
 1SG wash-REFL-1sg-NMLZ after oil-INS rub-REFL-1SG
 ‘After I wash, I rub myself with oil.’

- (19) Jaminjung/Ngaliwurru (Mirndi; Schultze-Berndt (2023 [this volume]))

a. *ga-wirri-ja*
 3MIN-bite-REFL.PST.PFV

‘he/she/it bit himself/herself/itself’

b. *Nginyju=biya mugurn ga-yu, janyung warr-warr*
 PROX=SEQ sleep 3MIN-be.PRS another RDP-scratch
ga-mili-ji=rndi.
 3MIN-get/handle-REFL.PRS=EGO

‘This one is sleeping, the other is scratching itself.’

The reflexive voice marker in Jaminjung/Ngaliwurru is cumulated with the verbal features of tense and aspect. Such cumulation is rare crosslinguistically, though not unattested elsewhere. For instance, the form of the middle voice endings in Early Vedic depends on tense and mood properties, in addition to person and number features. Example (20) illustrates this.

- (20) Early Vedic (Indo-European; Orqueda & Pooth (2023 [this volume]))

prché tát éno varuṇa
ask.1SG.IND.MID DEM.ACC.N sin.ACC.N Varuṇa.voc
'I ask myself about that sin, o Varuṇa' (RV 7.86.3a)

A variable form of the reflexive voice marker tends to be less frequent than an invariant form (cf. Haspelmath (2023: §5.2 [this volume])). The data from our sample confirm this observation as only two languages, Jaminjung/Ngaliturru and Early Vedic, have a variable form.

Finally, reflexive voice markers tend to display coexpression patterns across languages (see Kazenin 2001: 917 and Bahrt 2021). This means that they express functions that go beyond coreference such as reciprocal, autocausative, anti-causative, antipassive, passive, impersonal, and autobenefactive. Languages tend to demonstrate significant similarities concerning coexpression patterns they exhibit (Kazenin 2001: 920). Example (21) from Kambaata shows a reflexivizer expressing the autobenefactive function.

- (21) Kambaata (Afro-Asiatic; Treis (2023 [this volume]))

Gizz-á hoolam-á ir-á xáaz-z
money-M.ACC much-M.ACC time-M.ACC gather-3F.PFV.CVB
qú'mm=eecc-ít min-í mi'nn-itóo'u
gather=do.MID-3F.PFV.CVB house-M.ACC build.MID-3F.PFV

'After having saved money for many years, they could build a house for their own benefit.'

In Kambaata, the middle morpheme is realized by two predominately phonologically conditioned allomorphs: *-aqq* and *-'*. As reported by Treis (2023 [this volume]), this form can be used without any semantic restrictions to signal that the subject argument is the beneficiary of the action described by the verb. We observe this situation in (21), where the reflexivizer occurs with the verbs *ass-* 'do' (irregular middle form: *eecc-*) and *min-* 'build' and performs the autobenefactive function.

A similar situation is observed in Jóola Fóoni, in which one of the reflexive voice markers, i.e. *-ɔɔrɔ* performs the autobenefactive function, as shown in (22).

- (22) Jóola Fóoni (Atlantic-Congo; Creissels & Bassène (2023 [this volume]))

a. *Ninɔɔmε aseekom ewoto.*
n-i-nɔɔm-ε a-sεɛk-ɔm e-woto
PPF-SI:1SG-buy-COMPL SG-woman(A)-I:1SG SG-car(E)
'I bought a car for my wife.'

- b. *Nasccwccnii* *ewoto.*
n-ccm-ccn-i-ε e-woto
PPF-SI:1SG-buy-CCRC-COMPL SG-car(E)
'I bought a car for myself.'

In general, reflexive voice markers limited only to coreference are rare crosslinguistically. Such a situation may occur in a language in which other reflexive-like forms have been developed. They are often responsible for performing other functions typically expressed by reflexive voice markers. We can recognize this situation in Jóla Fóoni which has three voice markers, *-ɔɔr*, *-ɔ*, and *-ɔɔrɔ*. Even though each of them can encode agent and patient coreference, they all have been specialized in different directions of the middle domain and related functions. For instance, *-ɔɔr* is frequently used in the reciprocal function, *-ɔ* is prominent in de-causative and quasi-reflexive functions and *-ɔɔrɔ* is considered a default marker of subject-object coreference with productive autobenefactive and subject self-intensification functions.

3.5 Languages with other types of reflexivizers

Some languages may have reflexivizers that do not fall neatly into the classification discussed in §3.2, §3.3, and §3.4. Komnzo (Yam, Papua New Guinea) is one of them. The language has one type of reflexivizer that signals the coreference of the object with the subject. Specifically, it uses the inflectional verbal pattern called "middle template" with three morphological slots filled by the undergoer prefix *ŋ-* and the actor suffix *-th* encoding core arguments, and the diathetic prefix *a-* decreasing valency. This is illustrated in example (23).

- (23) Komnzo (Yam; Döhler (2023 [this volume]))
zä kwa *ŋa|t̪iū|nzé.*
PROX FUT [1SG:NPST:IPFV/paint]_{MID}
'I will paint myself here.'

Given the above, the reflexivizer of Komnzo can be regarded as a combination of voice and argument indexes (see also Haspelmath (2023: §5.4 [this volume]) for other types of reflexivizers in languages).

4 Languages without reflexivizers

Two languages from our sample do not have a specialized form to express coreference between the agent and patient. These are Kazym Khanty (Uralic) and Zen-

zontepéc Chatino (Otomanguean). They encode agent-patient coreference using personal pronouns in accusative/object case instead. Example (24) illustrates this situation for Kazym Khanty and (25) for Zenzontepéc Chatino.

- (24) Kazym Khanty (Uralic; Volkova & Toldova (2023 [this volume]))

<i>Evi-j-en</i>	<i>λ<u>w</u></i>	<i>šiwaλ-əs-λe.</i>
girl-OBL-POSS.2SG	(s)he-ACC	see-PST-3SG>SG
'The girl saw him/herself.'		

- (25) Zenzontepéc Chatino (Otomanguean; Campbell (2023 [this volume]))

- a. *Laa? nkā-na?a+tiká?ā tī nyá?a=yu j-yū.*
like.so PFV-see+cherished TPLZ mother=3SG.M OBJ-3SG.M

'His mother took care of him like that.'

- b. *Lē?.nu nka-jnyā=yu j-yū lē? nchaa=yu.*
then PFV-make=3SG.M OBJ-3SG.M then PROG.go=3SG.M

'Then he made himself (dressed himself up fancy), and he went.'

Even if such patterns are rare, they are still attested across the world's languages. Among various examples from the literature, we can mention, for instance, Old English (see e.g. van Gelderen 2000), Pirahã (Everett 1986), and some Oceanic languages (Moyse-Faurie 2008). However, the lack of a reflexivizer in these languages does not imply that they do not disambiguate coreference from disjoint reference. As known from the literature (e.g. Huang 2000; Givón 2001; and Ariel 2008), reference can be disambiguated at the discourse level through context.

Moreover, languages may possess formal means to disambiguate references, even if speakers do not fully grammaticalize or share such forms. This is the case of Kazym Khanty, in which a verb can have three agreement patterns: subject agreement, subject-object agreement, and passive (see Volkova & Toldova (2023: §2.4 [this volume])). It has been noted that some speakers use different agreement patterns to disambiguate reference. For several speakers, subject-object agreement on the verb triggers a coreferential reading, as in (26a), while the mere subject agreement suggests a non-coreferential interpretation, as in (26b).

- (26) Kazym Khanty (Uralic; Volkova & Toldova (2023 [this volume]))

- a. *λin λin-ti išək-λ-əλλen.*
they[DU] they[DU]-ACC praise-NPST-3DU>NSG
'They praised themselves.'

- b. *λin λin-ti išək-λ-əŋən.*
 they[DU] they[DU]-ACC praise-NPST-3DU
 *‘They praise themselves.’/‘They praise them.’

Yet other speakers of Kazym Khanty express coreference through doubling the 3rd person pronoun, (27), or adding the discourse particle *i* to the 3rd person pronoun, (28), in addition to subject-object agreement.

- (27) Kazym Khanty (Uralic; Volkova & Toldova (2023 [this volume]))
*Maša-j-en_i [λəw λəw-ti]_{i/*j} λapət-λ-əλλe.* (Speaker X)
 Masha-OBL-POSS.2SG (s)he (s)he-ACC feed-NPST-3SG>SG
 ‘Masha maintains herself by her own efforts (lit. Masha feeds herself).’
- (28) *Wan'a-en i λəw-ti išək-λ(-əλλe).*
 Vanja-POSS.2SG PT (s)he-ACC praise-NPST(-3SG>SG)
 ‘Vanja praises himself/*him.’

In Zenzontepec Chatino, referential ambiguity can be resolved by adding a self-intensifier, the adjectives *lákʷi?* ‘on one’s own’, as in (29), or *kʷi?ya*, ‘alone’, as in (30). However, it should be stressed that self-intensifiers are not considered a grammaticalized part of a complex reflexive form in this language.

- (29) Zenzontepec Chatino (Otomanguean; Campbell (2023 [this volume]))
Nyáʔa=yu nkā-línto j-yū
 mother=3SG.M PFV.CAUS-go.to.waste(.3) OBJ-3SG.M
 ‘So his mother killed him?...
?a nu lákʷi?=yu nkā-línto=yu j-yū.
 Q SBD INT=3SG.M PFV.CAUS-go.to.waste=3SG.M OBJ-3SG.M
 ...or he himself killed himself?’
- (30) *Nte-ʔne+lóʔō=kʷi?ya=ri=q j-nā.*
 PROG-do+WITH=INT=only=1INCL OBJ-1INCL
 ‘We ourselves are making ourselves suffer.’

The absence of reflexivizers in both languages can be related to the way they encode information structure. In Kazym Khanty, the anaphoric coding is strictly related to topicality, and argument marking is determined by information structure. Moreover, the language allows zero anaphora in object position. All these features determine that Kazym Khanty tends to avoid 3rd person pronouns in the direct object position in both coreferential and disjoint reading. Consequently, constructions like (24) are rare and speakers employ different strategies to replace a non-coreferential 3rd person object and a coreferential one. In other words,

the absence of a pronominal reflexivizer can be motivated by the unusualness of the 3rd person pronoun in the object position.

Information structure also plays a role in anaphora encoding in Zenzontepec Chatino. Intensifiers can be used to disambiguate coreference, as shown in (29–30). This is expected since self-intensifiers are often the source of reflexivizers (see König & Siemund 2000). Moreover, based on Comrie's (1999) hypothesis about the local domain, the most natural situation for the arguments of a predicate is to be non-coreferential, so special marking is most likely to be used when this expectation is not met. What is unexpected, however, is that a language may need additional marking to signal disjoint reference. This is precisely what happens in Zenzontepec Chatino, in which an independent demonstrative is added to the 3rd person pronoun to refer to a less topical aforementioned referent, as in (31).

- (31) Zenzontepec Chatino (Otomanguean; Campbell (2023 [this volume]))
y-akwi?=yu j-nuwē?
 PFV-speak=3SG.M OBJ-3.ANA
 'he_i spoke to him_j (that less topical aforementioned one)'
 *'he spoke to himself'

Based on (31), we can speculate that Zenzontepec Chatino tends to use zero-marking when there is topic continuity. Consequently, when topic continuity is violated in the case of disjoint reference, the language uses special marking, i.e. the anaphoric demonstrative *-nuwē?*

The examples of Kazym Khanty and Zenzontepec Chatino confirm that in languages without a reflexivizer, reference can be disambiguated through context or non-grammaticalized means. Moreover, it seems particularly interesting that the encoding of information structure plays an essential role in both languages.

5 Variation in languages with reflexivizers

In the present section, we discuss various types of variation emerging from the crosslinguistic comparison of reflexivizers. Specifically, §5.1 deals with the presence of different types of reflexivizers in a language, §5.2 analyzes the morphological variation of reflexivizers, and finally §5.3 explores their distributional variation with special attention to nominal reflexivizers.¹⁷

¹⁷ Many other levels of variation have been proposed in the questionnaire by Janic & Haspelmath (2023 [this volume]). The use of reflexivizers with introverted and extroverted verbs, the polyfunctionality of reflexivizers, or the coreference with various semantic roles are some of them. For the sake of space, we cannot treat them all in the present chapter. Nevertheless, they open a new avenue for further investigation that we plan to undertake in the future.

5.1 Coexistence of different types of reflexivizers in a language

Languages vary in terms of the number of reflexivizers. More than half of the languages from our sample have only one reflexivizer (cf. Table 7). Eight are reported to have two reflexivizers (cf. Table 8), and only three languages have three reflexivizers (cf. Table 9). The latter is in line with Haspelmath (2008: 47), who predicts that languages with more than two reflexivizers are rare but not impossible. The areal situation is summarized in Figure 4.

The presence of multiple reflexivizers in a language does not necessarily imply that they must be of different types. For instance, Oneida has the reflexive voice marker *-atat-/atate-* and another formally related semi-reflexive voice marker *-at-/ate-/ata-/an-/al-/a-*. Another example comes from Jóola Fóoñi in which *-ɔɔr*, *-ɔ*, and *-ɔɔrɔ* function as voice markers (Creissels & Bassène (2023: §4.1 [this volume])). In fact, languages with multiple reflexivizers (Tables 8 and 9) more frequently show diverse types of reflexivizers.

The three-fold distinction introduced by Haspelmath (2023 [this volume]) logically allows for seven possible combinations in a language (see Table 10). As we will see, not all of them are attested in our language sample.

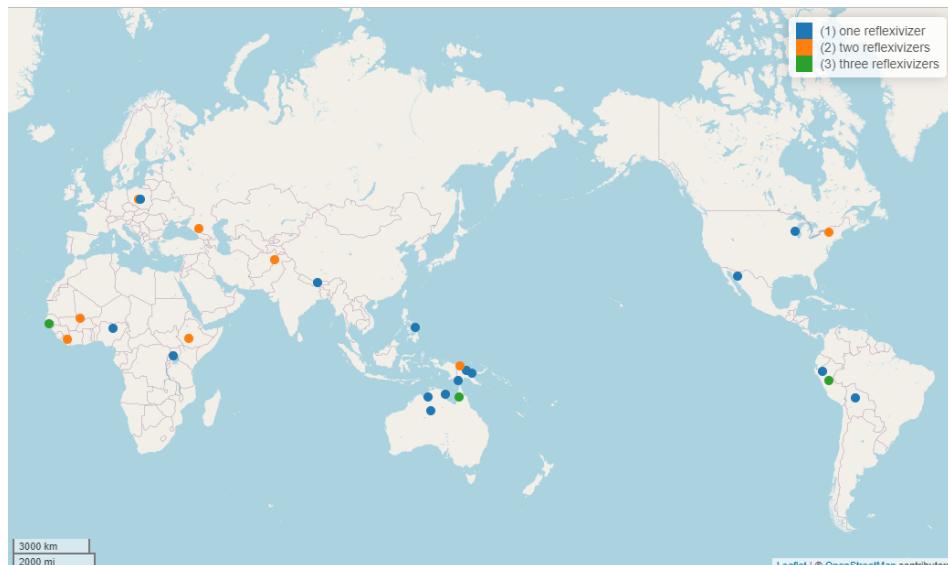
Table 11 lists the possible combinations of different types of reflexivizers detected in our sample.¹⁸

Both nominal and verbal reflexivizers are encountered in Kambaata (the reflexive noun *gag-á* ‘self’ vs. the middle voice marker *-aqq/-'*), Early Vedic (the reflexive nominal *tanú-* ‘body’ vs. the middle voice endings), and Kakataibo (the reflexive noun *nami* ‘body’ vs. the reflexive voice marker *-akat* and the middle marker *t*). Another combination involves a nominal and an argument marker reflexivizer. This type is illustrated by Abaza (the reflexive nominal *qa* ‘head’ vs. the reflexive argument marker *čə-*) and Walman (the reflexive nominal based on the word *ein* meaning ‘base of a tree, cause, reason’ vs. the reflexive argument marker *r-*). Another combination encountered in our sample involves the pronominal vs. argument marker distinction, which occurs in Polish (the reflexive pronominal *siebie* vs. the reflexive argument marker *się*). The last combination is based on the pronominal vs. verbal distinction. This situation is observed in Kuuk Thaayorre (i.e. the reflexive pronominal *ngathnay ~ ngathney* [1SG], *nhangk-nunt* [2SG], and *nhangnul* [3SG] vs. the reflexive voice suffix *-e* and the reciprocal voice suffix *-rr*).

¹⁸Table 11 contains Polish. Recall that this language has two reflexive forms: *się* and *siebie*, defined by Janic as voice and prounoun respectively. However, based on our discussion in §3.3.2, we approach the form *się* from a comparative perspective as an argument marker.

Table 7: Languages with one reflexivizer

	Language	Family	Macroarea
1.	Hausa	Afro-Asiatic	Africa
2.	Luganda	Atlantic-Congo	Africa
3.	Thulung	Sino-Tibetan	Eurasia
4.	Yiddish	Indo-European	Eurasia
5.	Chini	Lower Sepik-Ramu	Papuasia
6.	Nungon	Nuclear Trans-New Guinea	Papuasia
7.	Komnzo	Yam	Papuasia
8.	Waray	Austronesian	Papuasia
9.	Jaminjung/Ngaliwurru	Mirndi	Australia
10.	Warlpiri	Pama-Nyungan	Australia
11.	Hoocák	Siouan	N. America
12.	Yaqui	Uto-Aztecán	N. America
13.	Aguaruna	Chicham	S. America
14.	Anindilyakwa	Gunwinyguan	S. America
15.	Mojeño Trinitario	Arawakan	S. America



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Figure 4: Number of reflexivizers

Table 8: Languages with two reflexivizers

	Language	Family	Macroarea
1.	Bangime	Isolate	Africa
2.	Kambaata	Afro-Asiatic	Africa
3.	Mano	Mande	Africa
4.	Abaza	Abkhaz-Adyge	Eurasia
5.	Polish	Indo-European	Eurasia
6.	Early Vedic	Indo-European	Eurasia
7.	Walman	Nuclear Torricelli	Papunesia
8.	Oneida	Iroquoian	N. America

Table 9: Languages with three reflexivizers

	Language	Family	Macroarea
1.	Jóola Fóoñi	Atlantic-Congo	Africa
2.	Kuuk Thaayorre	Pama-Nyungan	Australia
3.	Kakataibo	Pano-Tacanan	S. America

Note that type 4 (+ nominal, + voice marker, + argument marker) and type 6 (– nominal, + voice marker, + argument marker) presented in Table 10 are unattested in our sample. Both patterns involve a reflexive voice marker and a reflex-

Table 10: Coexistence of different types of reflexivizers in a language

	Reflexive		
	Nominal	Voice marker	Argument marker
1.	+	–	–
2.	–	+	–
3.	–	–	+
4.	+	+	+
5.	+	+	–
6.	–	+	+
7.	+	–	+

Table 11: Languages with different types of reflexivizer

Language	Family	Macroarea	Types of reflexivizer
1. Kambaata	Afro-Asiatic	Africa	noun, voice marker
2. Abaza	Abkhaz-Adyge	Eurasia	noun, argument marker
3. Early Vedic	Indo-European	Eurasia	noun, voice marker
4. Polish	Indo-European	Eurasia	pronominoid, argument marker
5. Walman	Nuclear Torricelli	Papunesia	noun, argument marker
6. Kuuk Thaayorre	Pama-Nyungan	Australia	pronominoid, voice markers
7. Kakataibo	Pano-Tacanan	S. America	noun, voice markers

ive argument marker. The incompatibility of these two markers in the same language may be due to the fact they both occur on the verb, hence they may share some properties such as their tendency to be invariant. However, this question requires a further thorough investigation that we leave for future research.

Based on Table 11, we observe that a reflexive nominal appears systematically in a language with more than one reflexivizer. Consequently, we can formulate Generalization 3¹⁹ based on the types of reflexivizers in a language.

Generalization 3: If a language has different types of reflexivizers, one will always be a nominal.

Languages with more than one reflexivizer, i.e. combination 5 (+ nominal, + voice marker, – argument marker) and combination 7 (+ nominal, – voice marker, + argument marker) from Table 10, have already been discussed. Languages with one reflexivizer only, i.e. combination 1 (+ nominal, – voice marker, – argument marker), combination 2 (– nominal, + voice marker, – argument marker), and combination 3 (– nominal, – voice marker, + argument marker) from Table 10

¹⁹Reflexive nominals referring either to reflexive nouns or reflexive pronominals.

constitute the most common situation in our sample. Indeed, 15 (out of 26) languages are reported to have one reflexivizer (cf. Table 7).

Kazenin (2001: 926), who recognizes a two-fold “verbal” vs. “anaphoric” reflexive distinction, considers languages with a reflexive marker functioning as a valency-changing operator to be typologically rare. Based on Baker (1996: 51), he reports this situation in some polysynthetic languages such as Mohawk (Iroquoian). Our results slightly deviate from this observation. The reflexive voice marker is not as rare in our sample as might be expected. Five languages (out of 15 languages with one reflexive form, Table 7) employ a reflexive voice marker to signal coreference. These are listed in Table 12.²⁰

Table 12: Languages with one reflexivizer: voice marker

Language	Family	Macroarea	Form
1. Thulung	Sino-Tibetan	Eurasia	- <i>sit</i>
2. Chini	Lower Sepik-Ramu	Papunesia	- <i>nji-</i>
3. Anindilyakwa	Gunwinyguan	Australia	- <i>jungwV</i>
4. Jaminjung/Ngal iwurru	Mirndi	Australia	- <i>ji</i>
5. Hoocák	Siouan	N. America	- <i>kii-</i>

Languages reflecting combination 1 (+ nominal, – voice marker, – argument marker) from Table 10 are not rare in our sample either. Out of 15 languages with one reflexive form (cf. Table 7), five are reported to have a reflexive nominal. These are summarized in Table 13.

Finally, four languages corresponding to combination 3 (– nominal, – voice marker, + argument marker) from Table 10 are recognized in our sample. These are listed in Table 14.²¹ They express coreference of the agent and patient clause arguments through a reflexive argument marker.

²⁰We decided not to include in Table 12 the problematic case of Mojeño Trinitario whose reflexive form -*wo* can be approached from two different perspectives. Rose (2023 [this volume]) defines -*wo* as a middle voice marker, whereas from a comparative perspective which this chapter assumes, we treat this form as a reflexive argument marker (see §3.3.2).

²¹Table 14 contains two languages whose reflexivizers have unclear status in our comparative analysis. The first is Aguaruna. It has the reflexive form *m(a)/-mam(a)* that Overall (2023 [this volume]) treats as a voice marker. The second is Mojeño Trinitario. Rose (2023 [this volume]) defines the reflexive form -*wo* of this language as a middle voice marker. Recall that based on §3.3.2, we treat the reflexivizers of these two languages as reflexive argument markers. Hence, their presence in Table 14.

Table 13: Languages with one reflexivizer: nominal (noun or pronominal)

Language	Family	Macroarea	Type of reflexivizer
1. Hausa	Afro-Asiatic	Africa	noun
2. Yiddish	Indo-European	Eurasia	noun
3. Nungon	Nuclear Trans New Guinea	Paponesia	pronominal
4. Waray	Austronesian	Paponesia	noun
5. Yaqui	Uto-Aztecán	N. America	pronoun

Table 14: Languages with one reflexivizer: argument marker

Language	Family	Macroarea
1. Luganda	Atlantic-Congo	Africa
2. Warlpiri	Pama-Nyungan	Australia
3. Aguaruna	Chicham	S. America
4. Mojeño Trinitario	Arawakan	S. America

Komnzo (Döhler (2023 [this volume])) is the only language in our sample whose reflexivizer does not find a clear place in the three-fold typology of reflexivizers proposed by Haspelmath (2023 [this volume]) (see §3.5).

Kazennin (2001: 926) raises the question of the coexistence of verbal and anaphoric reflexivizers in a language. Their relationship can be historically based, where the anaphoric form is considered a source for the verbal reflexivizer, and frequently involves the middle domain. This is the case of many Indo-European languages, such as Russian *-s'/-sja* or Icelandic *-st* (see Kazennin 2001: 917 and Kemmer 1993: §5.2).²² However, Kazennin (2001) notices that such a situation is far from universal, and our data confirm this. The nominal reflexivizer *gag-á* ‘self’

²²Polish has the reflexive argument marker *się* and the pronominal *siebie* that are also historically related. The form *się* is currently in an intermediate state, i.e. in the transition from the anaphoric to verbal category. At the formal level, *się* shares both nominal and verbal properties, whereas at the functional level, it fully manifests properties typical of the voice category. At a more general level, we can hypothesize that the reflexive argument marker *się* represents an intermediate grammaticalization stage between a reflexive nominal and a reflexive voice category. See Faltz (1985: 56–57) on the transition from nominal to verbal reflexivizers.

and the verbal middle morpheme *-aqq/-'* in Kambaata or the reflexive nominal *tanú-* and the middle voice ending in Early Vedic are not historically related.

5.2 Morphological variation of reflexivizers

From a morphological point of view, a reflexive form can be either variable or invariant. Reflexive voice markers are generally invariant in our sample (see Table 15). They do not agree with the noun with which they are coreferential. Among the languages from our sample, only the reflexive voice marker of Early Vedic²³ shows agreement with the subject argument in person and number. In addition, Early Vedic but also Jaminjung/Ngaliwurru show an interaction of the reflexive voice marker with TAM features.²⁴

Table 15: Morphological variation of the reflexive voice marker

Language	Form	Variable
1. Kambaata	<i>-aqq/-'</i>	no
2. Thulung	<i>-sit</i>	no
3. Early Vedic	middle endings	yes: person, number, TAM
4. Chini	<i>nji-</i>	no
5. Anindilyakwa	<i>-jungwV</i>	no
6. Jaminjung/Ngaliwurru	<i>-ji</i>	yes: TAM
7. Kuuk Thaayorre	<i>-e, -rr</i>	no
8. Hoocák	<i>kii-</i>	no
9. Oneida	<i>-atat-, -at-</i>	no
10. Kakataibo	<i>-akat, -t</i>	no
11. Jóola Fóoñi	<i>-ɔɔr, -ɔ, -ɔɔɔrɔ</i>	no

A comparable situation holds for reflexive argument markers. As shown in Table 16, all the reflexive arguments from our sample are invariant except in Polish and Warlpiri. In Polish, the reflexive form *się* can have a dative form *se*, which is limited to colloquial use (see Janic (2023: 3.2.2 [this volume]) on the dative use of the reflexive form *się*). In Warlpiri, the invariant form *=nyanu* is used for all persons with the exception of 1st person singular and 2nd person

²³Note that the reflexive voice marker of Early Vedic is inflectional, hence susceptible to having a variable character.

²⁴Examples (19–20) in §3.4 show the interaction between the reflexivizer and TAM in Jaminjung/Ngaliwurru and Early Vedic respectively.

singular in imperative clauses. In these cases, the accusative/dative form of the non-anaphor non-subject enclitic (respectively *=ju/ji* and *=ngku/ngki*) are used (see Laughren (2023 [this volume])).

Table 16: Morphological variation of the reflexive argument marker

Language	Form	Variable
1. Luganda	<i>éé-</i>	no
2. Abaza	<i>čə-</i>	no
3. Polish	<i>się</i>	yes: ACC/GEN, DAT
4. Walman	<i>r-</i>	no
5. Warlpiri	<i>=nyanu/ =ju/ji</i>	yes: 1SG.ACC/DAT, 2SG.IMP.ACC/DAT
6. Aguaruna	<i>m(a)/ -mam(a)</i>	no
7. Mojeño Trinitario	<i>-wo</i>	no

The morphological variation is more pronounced for nominal reflexivizers, which include reflexive nouns and reflexive pronominoids. Dixon (2012: 156) points out that variable reflexivizers generally differ in the categories they encode. Either these may include person, number, and case, or only one of these categories, or a restricted set of person/number specifications. Concerning reflexive nouns, inflection can be marked on the accompanying possessive form. In Waray, for instance, *kalugaringon* ‘self’ is invariant, while the adpossessive form *íya* is inflected for nominal features. A similar situation holds for Abaza *j-qa* and Walman *mnon ein*, in which grammatical features are marked only on the adpossessive form. However, inflection can also involve the noun. This is observed in Early Vedic, where both the adpossessive form *svá-* (if present) and the noun *tanú-* are inflected. Regarding other languages from our sample, the adpossessive and noun are also inflected in Bangime, Hausa, and Kambaata. See Table 17 for the complete summary of our results.²⁵

The reflexive pronominoids from our sample can be either variable (as in the majority of cases) or invariant, as in the case of Mano *ē* and Yiddish *zikh*. The variable forms can vary for person, number, and case. We have not detected any variation for gender among the pronominoids. Table 18 summarizes our results.

Given Tables 15–18, we can organize the reflexivizers from our sample on a scale of morphological variation. See Figure 5.

²⁵The noun reflexivizer in Hausa and Abaza make a gender distinction in the 2nd and 3rd person singular, whereas in Walman, the reflexivizer distinguishes between gender only in the 3rd person singular.

Table 17: Morphological variation of the noun reflexivizer

Language	Form	Features
1. Bangime	<i>ñ=dēgè</i>	person, number
2. Hausa	<i>kâ-n-shì</i>	person, number, gender
3. Kambaata	<i>gag-á-s</i>	person, number, case, gender, honorificity
4. Abaza	<i>j-qa</i>	person, number, case, gender
5. Early Vedic	<i>(svá-) tanú-</i>	person, number, case
6. Walman	<i>mnon ein</i>	person, number, case, gender
7. Waray	<i>íya kalugaríngon</i>	person, number, case
8. Kakataibo	<i>ain nami=bi</i>	

Table 18: Morphological variation of the reflexive pronominoid

Language	Form	Variable	Features
1. Bangime	<i>mīl</i>	yes	person, number
2. Mano	<i>ē</i>	no	nonapplicable
3. Polish	<i>siebie</i>	yes	case
4. Yiddish	<i>zikh</i>	no	nonapplicable
5. Nungon	<i>ino</i>	yes	person, number
6. Kuuk Thaayorre	<i>nhangnul</i>	yes	person (in the singular)
7. Yaqui	<i>au, emo, omo</i>	yes	person, number

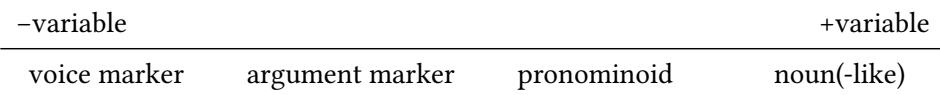


Figure 5: Morphological variation scale of reflexivizers

5.3 Distribution of nominal reflexivizers according to person

As we stated in §5.2, nominal reflexivizers are high on the morphological variation scale. The most studied parameter of variation of nominal reflexivizers is person. Reflexivizers are generally available for the 3rd person singular but not necessarily for the 1st and 2nd person. This idea has been expressed in Generalization 4, first by Faltz (1985: 42–43) and subsequently by Comrie (1999: 337), and is based on the Implicational Hierarchy 1.

Generalization 4: If a language has a reflexive pronoun, then this pronoun is used to indicate the coreference with the 3rd person antecedent but not necessarily with the antecedent in the 1st and 2nd person.

Implicational Hierarchy 1: 3 > 2&1

The opposite situation, in which coreference is signaled by a reflexive pronoun in the 1st or 2nd person but not in the 3rd person, would be highly unexpected (see Faltz 1985: 43). This is because the speech act clearly defines the referents of the 1st and 2nd person pronouns. Hence, there is no need to signal this by the additional use of a reflexive form. Our results are in line with this observation.

Faltz (1985: 119) subsequently proposes a more controversial version of Generalization 4, suggesting Generalization 5.

Generalization 5: If a reflexive pronominal is used in the nth person, then it is used in the (n+l)th person.

Generalization 5 logically implies Implicational Hierarchy 2.

Implicational Hierarchy 2: 3 > 2 > 1

According to Faltz (1985: 43), Implicational Hierarchy 2 has diachronic significance. It suggests that if a reflexive form extends from the 3rd to the 1st and 2nd person, then it extends first to the 2nd person and subsequently to the 1st person.

The majority of our languages remain in line with Implicational Hierarchy 1, and we do not have data providing evidence for Implicational Hierarchy 2. Only Bangime seems to contradict Generalization 4 (Implicational Hierarchy 1). It uses the set C of pronouns to express disjoint reference and the set D to indicate coreference (see Hantgan (2023: 3.1 [this volume])). However, the pronouns of set C and D are identical in all persons in the singular and the 2nd plural, but they differ in the 1st and 3rd person plural. Thus, at first sight, the same form of 3rd person is used to mark both disjoint reference, as in (32a), and coreference, as in (32b).

(32) Bangime (isolate; Hantgan (2023 [this volume]))

- a. *∅ dègū mī*
3SG.A hit.3SG.PFV 3SG.C
'He/She_x hit him/her_y.'
- b. *∅ dègū mī*
3SG.A hit.3SG.PFV 3SG.D
'He/She_x hit himself/herself_x'.

However, this could be classified as a case of homophony since the two forms of *mī* formally belong to two different pronoun sets (C and D).

Generally speaking, if a reflexivizer is present in a language, it is used at least for the 3rd person. For other persons, several options are possible. We distinguish three main types of situations in our language sample based on Faltz (1985) and Puddu (2010). They refer to the marking of the person in reflexive pronominals.

The first situation involves languages that use a reflexivizer only for the 3rd person. Faltz (1985) observes that a reflexivizer used only in the 3rd person is "functionally streamlined" because it appears only to salvage the case of an NP whose reference cannot be otherwise specified. Mano in (33) illustrates this case. The language has a dedicated reflexive pronoun *ē*, which is used with 3rd singular antecedents within the same minimal finite clause (i.e. a clause that does not contain a subordinate clause). Example (33a) illustrates this point. For other persons and numbers, basic personal pronouns are used instead, as shown in (33b).

(33) Mano (Mande; Khachaturyan (2023 [this volume]))

- a. *ē ē gīl*
3SG.PST 3SG.REFL wound
'She wounded herself.'
- b. *kō kō gīl*
1PL.PST 1PL wound
'We wounded ourselves.'

Another situation concerns languages that employ the same reflexive form for all persons. According to Faltz (1985), an all-person reflexive is "strategically streamlined" in a sense that even if it may be redundant in some cases, the subject-object coreference is always marked whenever present. This is the case of Standard Yiddish *zikh* (as opposed to Central Yiddish) (Luchina (2023 [this volume])) and Polish *się* and *siebie*, (34), from our sample (Janic (2023 [this volume])).

- (34) Polish (Indo-European; Janic (2023 [this volume]))

- a. *Marek szanuje tylko siebie.*
Marek.NOM respect.PRS.3SG only SELF.ACC
'Marek respects only himself.'
- b. *Często mówicie do siebie na głos.*
often talk.out.PRS.2PL to SELF.GEN on voice.SG(M).ACC
'You often talk out loud to yourselves.'

The last situation concerns the languages in which a different reflexive marker is available for all persons and numbers. In such a case, Puddu (2010: 389) proposes a “paradigmatic principle” that governs languages such as English or Classical Greek where a different reflexive marker is available for all persons and numbers building a paradigm analogous to personal pronouns. In our sample, this is the case with Nungon *ino* and Yaqui *emo* (see Sarvasy (2023: §2 [this volume]) and Guerrero (2023: §2.2 [this volume]) for the full paradigms).

There are also several “in-between” patterns that deserve special attention. For instance, in Bangime, the same form *mīl* (set D) is used for all persons except the 1st singular and the 2nd person singular and plural. Kuuk Thaayorre has only singular reflexive pronouns: 1st person *ngathnay*, 2nd person *nhangknunt*, and 3rd person *nhangnul*. Interestingly, dual and plural reflexive pronouns are not replaced by the corresponding non-reflexive object pronouns in this language. Rather, the verbal reflexivizer (i.e. the verbal reciprocralizer) or a lexical reflexive verb are used instead. Finally, in Warlpiri, the enclitic *=nyanu* is used for all persons but the 1st singular and the 2nd singular in imperative clauses.

It has already been noted in several studies that reflexive forms can diachronically extend from one person, especially from the 3rd person, to others (see e.g. Faltz 1985). This has been reported for the reflexes of *se- in several Indo-European languages. In many Romance varieties, as in Campidanese Sardinian, the original Latin reflexive *se* extended to other persons, especially in the plural (see Benincà & Poletto 2005 and de Benito Moreno 2015). As for the Germanic sub-branch, *sik has extended to all persons in some languages. Icelandic and Standard Yiddish are cases in point. The same tendency can be observed in Yaqui (Uto-Aztecan), where *emo*, as one can read in Guerrero (2023: 2.2 [this volume])’s chapter, is gradually extending its use to all persons. It is worth mentioning that the extension of the 3rd person pronouns to other persons has also been taking place in other languages from the Uto-Aztecan family, including Pima (see also Faltz 1985: 120–121).

6 Conclusions

In this chapter, we have applied Haspelmath (2023 [this volume])'s classification of reflexive constructions to the languages of the present volume. We also checked whether generalizations proposed in the literature hold for our data and formulated new generalizations.

The tripartite classification of reflexivizers into reflexive nominals, reflexive argument markers, and reflexive voice markers contrasts with a more traditional, two-fold distinction of reflexivizers into “verbal” and “nominal” types. The innovative, tripartite classification by Haspelmath (2023 [this volume]) proves useful in crosslinguistic analyses but raises some issues when applied to language-specific descriptions (see §3.3.2). This challenge was particularly apparent in the case of Polish, Aguaruna, and Mojeño Trinitario, whose analyses of reflexivizers reflected the well-known and ongoing debate about how to reconcile comparative research with language-specific description (see “Discussion” 2016 of *Linguistic Typology* and the papers in Alfieri et al. 2021, among others). Another issue related to the tripartite classification by Haspelmath (2023 [this volume]) was that some reflexivizers did not find a clear place, such as the one from Komnzo (§3.5).

Data from our sample generally confirmed well-known generalizations about reflexive constructions, revealing at the same time unexpected features. First, most of the languages from our sample have a special form to signal the coreference between two participants of the minimal clause. This observation confirms Generalization 1, based on Comrie (1999: 341). Only two (out of 28) languages lack a reflexivizer. These are Kazym Khanty and Zenzontepec Chatino. However, as expected, these languages can still disambiguate coreference from disjoint reference, for instance, through context or non-grammaticalized markers. Information structure is thus essential in these two languages as it contributes to reference disambiguation.

Moreover, according to what was predicted in the literature (see Haspelmath 2008: 47), the majority of the languages from our sample have either one or two reflexivizers. In comparison, languages with three reflexivizers are rare. Only Jóola Fóoñi, Kuuk Thaayorre, and Kakataibo were reported to have three reflexivizers. Nominal reflexivizers (including reflexive nouns and pronominoids) are more common than reflexive argument markers and reflexive voice markers. Based on our results, we formulated Generalization 3 related to this topic, according to which languages with different reflexivizers should have at least one reflexivizer of the nominal type. Given, however, that the dominance of nominal reflexives is not very strong in our sample and that languages with voice markers

and argument markers are also well represented, these results shed new light on the dominating presence of nominal reflexives in languages and deserve further investigation.

The three types of reflexivizers are present in all six macroareas, i.e. Africa, Eurasia, Papunesia, Australia, North America, and South America. As for noun reflexivizers, body parts are confirmed to be their primary source. However, we have detected an unexpected source in Walman: ‘base of a tree, cause, reason’, which has not been mentioned in the literature so far.

Based on the analysis of reflexive nouns, we formulated Generalization 2 which concerns the presence and absence of adposessive forms with noun reflexivizers. According to this generalization, if a language has a reflexivizer composed of a nominal and a bound possessive person form, the possessive is obligatory. Regarding pronominaloids, in contrast to what was observed in the literature (i.e. Haspelmath (2023: §6.4 [this volume])), they are not necessarily rare in our language sample. Reflexive pronominaloids are found in seven (out of 26) languages. Furthermore, the investigation of reflexive voice markers confirmed that when this type of reflexivizer results from a derivational process, it tends to be realized as a suffix or prefix (Dixon 2012: 172). The well-known fact that reflexive voice markers that have rich coexpression patterns are more frequent than those expressing only the coreference meaning also found confirmation in our data (Kazennin 2001: 920). We have no example of a language in which a reflexive voice marker only encoded coreference. The analysis of reflexive voice markers further confirmed that they manifest significant similarities regarding coexpression patterns, the latter frequently covered by the associated middle domain (see Kemmer 1993: §2.1).

Finally, morphological variation is typical of nominal reflexivizers, while reflexive argument markers and voice markers tend to be invariant with some interesting in-between cases. For instance, the voice marking of Early Vedic shows agreement with the subject argument in person and number.²⁶ It also interacts with TAM features. The analysis of the reflexive voice marker of Jaminjung/Ngaliwurru showed that this form also interacts with TAM features. Moreover, the argument marker of Polish is currently undergoing grammaticalization in the direction of a voice marker. Even if it already displays an advanced degree of grammaticalization through passive, antipassive, and impersonal derivations, its dative form *se* is still present and widely used in the language (Table 16 in

²⁶This morphological variation may, however, result from the inflectional rather than derivational character of the voice marker in Early Vedic.

§5.2).²⁷ Last but not least, our data confirmed Generalization 4 proposed by Faltz (1985: 42–43) and Comrie (1999: 337) stating that if a language has a reflexivizer, it must be used for 3rd person singular, from where it can further extend to other persons.

In the present chapter, we focused primarily on the formal aspect of reflexive constructions. Due to limited space, we dedicated little attention to their functional aspects, mentioning only their coexpression patterns. Furthermore, we did not discuss different reflexive constructions like oblique, adposessive, or long-distance. These are interesting on their own and open an avenue for further research that we plan to undertake in the nearest future to arrive at a better understanding of reflexive constructions.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

²⁷See Janic (2023 [this volume]) for a brief discussion of the productive use of dative *sie* in colloquial speech in Polish.

ACT	active	PT	particle
ANA	anaphoric demonstrative	PLURACT	pluractional
ANAPH	anaphor	PNC	punctual aspect
EGO	speaker authority	RDP	reduplication
FACT	factual mode	RECPST	recent past
FI	feminine-indefinite	REM.PST	remote past
FV	final vowel	REP	reportative
JOIN	joiner vowel	SBD	subordinator
INCL	inclusive (1PL)	SEMIREFL	semi-reflexive
INT	intensifier	SEQ	sequential ('then')
MID	middle	SI	subject index
MIN	minimal	SPON	spontaneous mood
NAR	narrative	STV	stative aspect
NH	non-human	TLOC	translocative
NON.PROX	non-proximal to the addressee	TPLZ	directionality
NPST	nonpast	VEG	vegetable noun class
PC	paucational verbal number	WITH	oblique (comitative or instrument)
PPF	pre-prefix		

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Part IX

Appendix

Chapter 32

Questionnaire on reflexive constructions in the world's languages

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A short note on our terminology: the term REFLEXIVIZER refers to any specialized form that expresses coreference within a clause. By SPECIALIZED FORM we understand a form which at least in certain conditions necessarily expresses the coreference meaning (even if non-coreference meanings are possible elsewhere). Reflexivizers can be dependent or non-dependent forms like reflexive (pro)nouns, reflexive argument markers, or reflexive voice markers. Languages that have not developed a specialized reflexivizer express coreference with the help of other linguistic forms, e.g. personal pronouns. In this context, we prefer to talk about a NON-REFLEXIVE FORM.

Basic uses of reflexivizers

1. Describe the *personal pronouns* and *reflexive pronouns* of the language. If the language also has *verbal reflexivizers* (reflexive argument markers or reflexive voice markers), give a brief description of the relevant verbal marking patterns.
2. If the language uses a *reflexive pronoun* to express coreference, does it have distinctions such as the following?
 - a. person
 - b. case
 - c. number
 - d. obviation
 - e. gender



3. How is *coreference of the agent subject with the patient referent in object function* expressed in the language? Give examples like (a–d) and indicate the form (if any) expressing coreference.
 - a. I saw myself in the mirror.¹
 - b. My friend hates himself.
 - c. She praised herself.
 - d. The man killed himself.
4. If the language uses a specialized reflexivizer to express coreference, is this form *obligatory or optional*?
5. If the language has *several different reflexivizers* used under different conditions, what determines their distribution?
 - a. If they are in a complementary distribution, define the conditions under which each reflexivizers is selected.
 - b. If the forms can occur in the same environments, can you think of any context in which one form is preferred over another?

Some languages use a range of different forms to express agent-patient coreference. For instance, Dutch employs reflexive pronouns only in the third person; coreference with the first and second person is expressed by ordinary personal pronouns.

6. Is the use of reflexivizers subject to specific conditions relating to person or number? If it is, define them and provide relevant examples.

Specialized reflexive form in other functions

7. Does the reflexive form have other uses? Specify and provide relevant examples.

¹Feel free to change the provided examples here and elsewhere in the questionnaire, if for some reasons they are problematic in your language.

Contrast between introverted and extroverted verbs

Transitive verbs that allow a human object can be divided into introverted and extroverted classes (Haiman 1980: 803; König & Siemund 2000: 61). Extroverted actions express socially antagonistic events such as 'kill', 'kick', 'attack', 'hate' and 'criticize', whereas introverted actions include body care (or grooming) actions exemplified by 'wash', 'shave', 'dress', 'bathe', and a few others such as 'defend oneself'.

8. How are autopathic actions with extroverted verbs expressed in the language? Give examples like (a–c) and indicate the form (if any) responsible for the coreference interpretation.
 - a. The dog bit itself.
 - b. The girl hates herself.
 - c. The politician criticized himself.

9. How are autopathic actions with introverted verbs expressed in your language? Translate the examples (a–c) and indicate the form (if any) responsible for the coreference interpretation.
 - a. The dog was washing himself.
 - b. The girl washed.
 - c. He shaved.

Contrast between body-part and whole-body actions

Some languages encode body-part actions (combing hair, brushing teeth, clipping nails) similarly to those involving whole-body actions (wash, bathe, get tented) i.e. with the help of the same reflexive form (e.g. French *se peigner* 'to comb one's hair' vs. *se laver* 'to wash'). In other languages, body-part and whole-body actions are treated apart, the former being expressed through a transitive construction with the body part expressed as object (e.g. English: *I comb my hair* vs. *I washed*). Moreover, some languages specify the body-part object in addition to the reflexive form (e.g. French: *Il se lave les mains* 'he washes his hands'). If your language contrast body-part actions with whole-body actions in coding, proceed to point 20, otherwise skip it.

10. How are body-part actions expressed in your language: (i) through coreference, or (ii) through a transitive construction with the body part expressed as object? Translate (a–c).
 - a. The men shaved their beard.
 - b. She scratched her back.
 - c. He brushed his teeth.
11. If your language employs a specialized reflexive form to express body-part actions, can the body part be expressed as well?
12. How are whole-body actions expressed in your language? Translate the examples (a–c) and indicate the form (if any) responsible for the coreference interpretation.
 - a. The men got dressed.
 - b. She washed.
 - c. I bathed.

Reflexive pronoun in subject position

13. Except for a few cases (e.g. Georgian), languages do not allow reflexive pronouns in subject function. Does your language support this crosslinguistic observation? If it does not, provide a relevant example.

Coreference of the subject with various semantic roles

14. (a) *Possessor*. How is coreference of the subject with a possessor referent expressed in your language? Translate (a–c) and indicate the form (if any) triggering the coreference meaning.
 - a. She₁ took her₁ umbrella.
 - b. John₁ reads his₁ book.
 - c. The women₁ swept their₁ rooms.

Can you contrast examples from 14a with those provided in 14b in which the referent of possessor is not coreferential with a subject?

- (b)
 - a. She₁ took her₂ umbrella.
 - b. John₁ reads his₂ book.

- c. The women₁ swept their₂ rooms.
15. (a) *Locative*. How is coreference of the subject with a spatial referent expressed in your language? Translate (a–c) and indicate the form (if any) triggering the coreference meaning.
- a. She₁ saw a snake beside her₁.
 - b. John₁ put a book next to him₁.
 - c. She₁ left the traces behind her₁.
- (b) Contrast examples from 15a with those in provided 15b in which the spatial referent is not coreferential with a subject.
- a. She₁ saw a snake beside her₂.
 - b. John₁ put a book next to him₂.
 - c. She₁ left the traces behind her₂.
16. (a) *Benefactive*. How is coreference of the subject with a beneficiary referent expressed in your language? Translate (a–c) and indicate the form (if any) triggering coreference.
- a. She bought a book for herself.
 - b. The boy cooked a dinner for himself.
 - c. They built a house for themselves.
- (b) Contrast examples from 16a with those provided in 16b in which the referent of beneficiary is not coreferential with a subject.
- a. She bought a book for her.
 - b. He cooked a dinner for him.
 - c. You built a house for them.
17. (a) *Recipient*. How is coreference of the subject with a recipient referent expressed in your language? Translate (a–c) and indicate the form (if any) triggering the coreference meaning.
- a. John talked to himself.
 - b. They sent a postcard to themselves.
 - c. The girl gave herself a present.
- (b) Contrast examples from 17a with those provided in 17b in which the referent of recipient is not coreferential with a subject.

- a. John talked to him.
- b. They sent a postcard to them.
- c. The girl gave a present to her.

Coreference between non-subject arguments

18. How is coreference between two non-subject arguments expressed in a single clause? Translate (a–c) and indicate the form (if any) responsible for the coreference interpretation.
- a. She told us₁ about ourselves₁.
 - b. He spoke with John₁ about himself₁.
 - c. John showed Mary₁ a picture of herself₁.

Contrast between coreference and disjoint reference

19. Contrast the subject-coreference pronoun in object position (examples') with disjoint reference pronoun in object position (examples''). Which pronouns does your language use to code these two types of situations?
- a'. The man saw himself. vs. a'' The man saw him.
 - b'. The woman criticized herself. vs. b'' The woman criticized her.
 - c'. He admired himself. vs. c'' He admired him.

Contrast between object and nominal adpossessor

20. Contrast the subject-coreferential pronoun in object position (examples') with the subject-coreferential pronouns in adnominal possessive position (examples''). Which pronouns does your language use to code these two types of situations?
- a'. She₁ killed herself₁. vs. a'' She₁ killed her_{1/2} lover.
 - b'. He₁ admires himself₁. vs. b'' He₁ admires his_{1/2} boss.
 - c'. She₁ saw herself₁. vs. c'' She₁ saw her_{1/2} sister.

Contrast between exact and inclusive coreference

21. Contrast exact coreference (examples') with inclusive coreference (examples"). Which pronouns does your language use to code these two types of situations?
- a'. She₁ admires herself₁. vs. a" She₁ admires herself and the others_{1+X}.
 - b'. He₁ criticized himself₁. vs. b" He₁ criticized himself and the others_{1+X}.
 - c'. He₁ defended himself₁. vs. c" He₁ defended himself and the others_{1+X}.

Long-distance coreference

22. How is coreference of the subject across clauses expressed in your language? Translate (a–c) and indicate the form (if any) responsible for the coreference interpretation.
- a. She₁ thought that she₁ had enough money.
 - b. The boy₁ said that he₁ must go home.
 - c. We₁ said that we₁ worked the whole day.

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Reflexive constructions in the world's languages

This landmark publication brings together 27 papers on reflexive constructions in languages from around the world, covering all continents and diverse language types. The volume also contains three overview papers and a questionnaire. Even though reflexive constructions have often been discussed from a variety of angles, this is the first edited volume of its kind. All the chapters are based on original data collected by the authors, and they are broadly comparable through careful terminological usage, even though each paper is primarily based on language-internal evidence. The volume also contains two introductory chapters by the editors that set the stage and lay out the main comparative concepts, as well as one concluding chapter that presents generalizations.