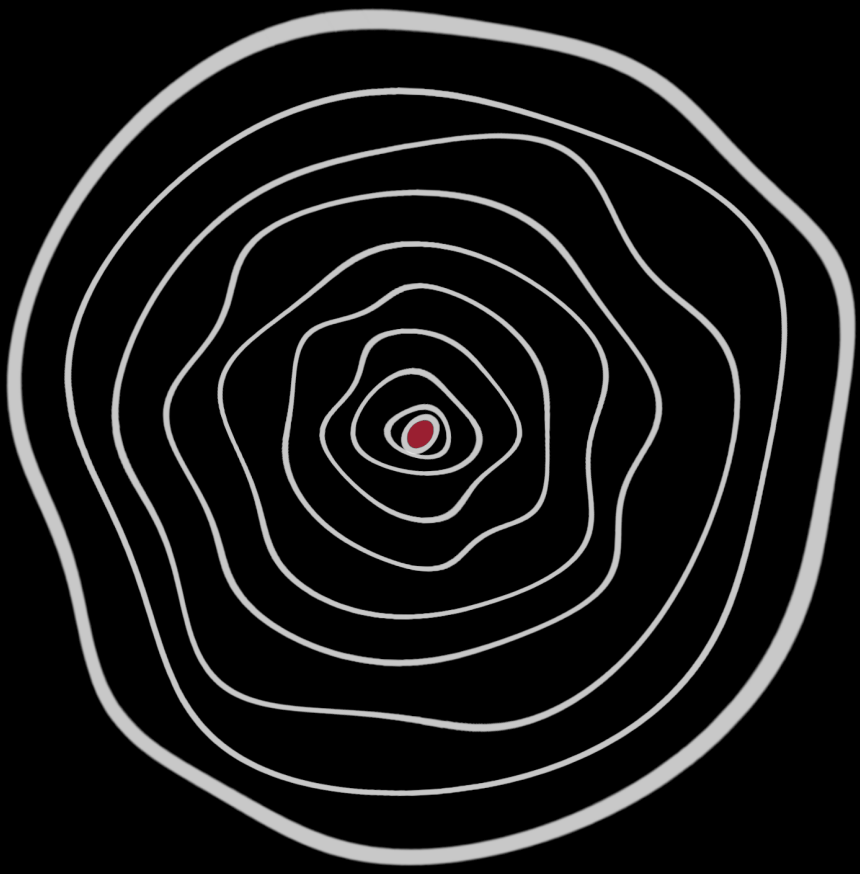

Giada Palmieri

Lexical and Grammatical Reciprocity

Perspectives from Romance, Bantu and beyond

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Utrecht University

Institute for Language Sciences

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Lexical and Grammatical Reciprocity

Perspectives from Romance, Bantu and beyond

Lexicale en grammaticale reciprociteit

Perspectieven vanuit Romaans, Bantoe en verder

(met een samenvatting in het Nederlands)

Proefschrift

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Contents

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I'm lucky enough to have another cliché that I cannot escape: thanking my family for their unconditional love and support, far detached from any notions of accomplishment – academic or otherwise.

List of abbreviations

1	first person
2	second person
3	third person
[n]	nominal class
ACC	accusative
ACT	active voice
AN	animate
AUX	auxiliary
AV	active voice
COMPL	completive
CONV	converb
COP	copula
DIM	diminutive
DOM	differential object marking
DU	dual
DUR	durative
FV	final vowel
GEN	genitive

HAB	habitual
ILL	illative
INF	infinitive
INGR	ingressive
INTR	intransitive
LOC	locative
NACT	non-active voice
NEG	negation
NMLZ.SS	same subject nominalizer
NOM	nominative
OM	object marker
PA	partitive article
PFV	perfective
PL	plural
POSS	possessive
PRED	predicator
PROG	progressive
PRS	present tense
PST	past tense
PTCP	participle
RECP	reciprocal
REFL	reflexive
SBJ	subject
SEQ	sequential
SM	subject marker
SG	singular
TOP	topic

CHAPTER 1

Introduction

In linguistics, the notion of reciprocity is traditionally associated to configurations with two or more participants that are in identical relations to each other (Nedjalkov, 2007). For example, a situation where Mary kisses Lisa and Lisa kisses Mary is classified as reciprocal, because each of the two people is the agent and the patient of a kissing event. The vast majority of natural languages do not need to resort to coordinated clauses to express reciprocity, and have dedicated constructions that lead to similar semantic effects (Frajzyngier and Walker, 2000; Nedjalkov et al., 2007; König and Gast, 2008; Evans et al., 2011).

In English, there are two ways to express reciprocal meanings. One common strategy involves pronominal elements that occupy an argument position, like *each other* or *one another*. This strategy is productive: such pronominals can occupy the direct object position of any transitive verb, as in (1).

(1) a. The girls kissed each other.

b. The girls described each other.

Additionally, English pronominal reciprocal elements also appear in more complex syntactic constructions, like *they sit on top of each other* or *they take care of each other's pets*. I will refer to this strategy as *grammatical reciprocity*.

Another strategy of reciprocity in English involves predicates such as *kiss*, *collide* or *meet*, which lead to reciprocal interpretations in their intransitive form. These predicates alternate between an intransitive form (as in *the girls kissed* or *the cars collided*) and a binary form, which can have a direct object (as in *the girl kissed the cat*) or an object introduced by a preposition (as in *the car collided with the bus*). This strategy is not productive: lexical intransitive predicates with a reciprocal meaning are a closed class. For instance, reciprocity emerges with intransitive *kiss* or *collide* in (2a) below, but many verbs in English do not have an intransitive entry which shows this type of reciprocity (2b). I will refer to the strategy that governs the alternation of verbal forms like *kiss* and *collide* as *lexical reciprocity*.

(2) a. The girls kissed/collided.
b. * The girls described.

Like all English verbs that take two arguments, transitive *kiss* or *collide with* can appear with a pronominal reciprocal object. Thus, they support both lexical and grammatical reciprocity. By contrast, transitive verbs like *describe* only support the productive, grammatical strategy.

Lexical reciprocity and grammatical reciprocity lead to different interpretations. Let us take the verb *kiss* as an example: the instance of grammatical reciprocity in (1a) can be interpreted with different unidirectional events. For instance, the sentence supports a scenario where each girl kissed the other on the forehead, possibly at different moments. By contrast, the intransitive counterpart of the same verb in (2a) cannot be used to describe such a scenario. Rather, sentence (2a) necessarily describes one mutual simultaneous kiss between the participants (say, a romantic kiss on the lips).

In English, the distinction between lexical and grammatical processes can also be identified in a different semantic domain: reflexivity. Grammatical reflexivity is productively derived with reflexive pronouns like *herself* in (3), whereas lexical reflexivity is restricted to a closed class of predicates that get a reflexive interpretation with zero morphology (4).

(3) a. The girl bathed herself.
b. The girl described herself.

(4) a. The girl bathed.

b. * The girl described.

As in the case of reciprocity, there are semantic distinctions between lexical reflexives and grammatical reflexives, though they are somewhat more subtle than in the case of reciprocity (Doron and Rappaport Hovav, 2009).

Although the distinction between lexical reciprocity (reflexivity) and grammatical reciprocity (reflexivity) is clear-cut in English, the situation is not as transparent in Romance languages. Let us take an example from Italian: sentence (5) below shows that the different English configurations observed in (1)-(4) can be rendered with one construction.

(5) Le ragazze si sono baciate/ lavate. (Italian)
the girls SE be.AUX.3PL kiss.PTCP wash.PTCP
'The girls kissed/washed (each other/themselves).'

In Italian finite clauses, any verb that has a transitive alternate receives a reciprocal or reflexive interpretation with the clitic *si*, and there is no overt distinction between lexical and grammatical reciprocity, or between lexical and grammatical reflexivity. Furthermore, reciprocity and reflexivity themselves are not morphologically distinguished in such cases. Similar patterns with the clitic *si*/*se* (henceforth *se*) can be found in other Romance languages.

The examples above highlight two general differences between English and Romance languages:

(i) English always makes an overt distinction between grammatical reciprocal and grammatical reflexive meanings, whereas Romance languages do not always make such a distinction.

(ii) English makes an overt distinction between lexical and grammatical strategies, whereas Romance languages often do not.

These observations raise a puzzle: are the distinctions between reciprocity and reflexivity and between lexical and grammatical processes absent altogether in Romance languages, or are they encoded, but in a way that is morphosyntactically less evident than in English?

The question of the distinction between reciprocity and reflexivity translates into whether these meanings are the outcome of the same operation or of two distinct ones – or, in other words, whether Romance *se*-clauses are underspecified or ambiguous between reciprocity and reflexivity. An analysis in terms of underspecification has been proposed by Cable (2012), who extended to Romance

a proposal on the underspecified nature of reciprocal/reflexive constructions in other languages (Murray, 2008). Though theoretically possible, I will show that such an account is not empirically adequate for Romance languages. An analysis that considers *se*-clauses underspecified predicts that they should allow interpretations that are partially reciprocal and partially reflexive: in the absence of a lexical distinction, reciprocity and reflexivity should be concurrently available. Let us take as an example the Italian *se*-clause in (5) above, and let us assume that the subject set refers to three girls: Ann, Bea and Clio. An analysis of *se*-clauses that relies on underspecification predicts that (5) should truthfully hold in a scenario where some of the girls kissed/washed each other and some of the girls kissed/washed themselves. A possible instantiation of such a 'mixed' reading is provided in Figure 1.1 below, where Ann and Bea kissed/washed each other and Clio kissed/washed herself.

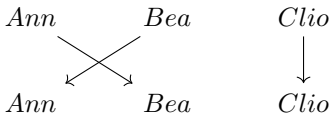

Figure 1.1: Possible reciprocal/reflexive 'mixed' reading.

I will show that this prediction does not hold in Romance, where such 'mixed' interpretations are not generally accessible in *se*-clauses to native speakers. I will present empirical evidence indicating that there is currently no support for the underspecification account of reciprocity/reflexivity in Romance, and that we must look elsewhere for a general account of this polysemy.

With respect to the distinction between lexical and grammatical strategies, two crucial questions concern whether both processes are active in Romance, and what the contribution of *se* is to each of these meanings. Several studies have focused on the syntactic role of *se* in grammatical valence-changing operations, but less attention has been paid to lexical reciprocal and lexical reflexive entries. Some studies did postulate the existence of an intransitive lexical entry of some Romance verbs (Labelle, 2008; Doron and Rappaport Hovav, 2009; Siloni, 2012), but these observations have not led to a comprehensive characterization of this class of predicates. Currently, there is no consensus on how to identify lexical reciprocal or reflexive entries based on criteria that are applicable to multiple Romance languages. Studies that acknowledged the existence of lexical reciprocal and lexical reflexive verbs in Romance agreed on the fact that

se must be semantically redundant when it appears with such predicates: if valence-reduction is a lexical operation, *se* cannot be directly responsible for reflexive or reciprocal interpretations (Labelle, 2008; Doron and Rappaport Hovav, 2009). This strand of literature proposed that *se* does not express lexical reciprocal/reflexive meanings, but such a generalization has never been extended to grammatical derivational processes. However, I will show that reciprocity and reflexivity can also emerge without *se* when it comes to grammatical strategies. Thus, what we miss is a systematic characterization of lexical intransitive entries in Romance, and a semantic theory that captures the interpretations of lexical and grammatical reciprocals, independently of the presence or absence of *se*.

The first aim of the present dissertation is to address these open challenges. I will propose that reciprocity and reflexivity are distinct categories in Romance, and they may both be realized lexically or grammatically. I will propose that there are Romance verbs with a lexical reciprocal or reflexive entry, that have the same semantics as similar intransitives in English (e.g., *kiss* or *bathe*). I will argue that *se* appears in the intransitive realization of predicates that have a transitive alternate, but it does not directly express reciprocity or reflexivity: grammatical reciprocity and reflexivity are the result of two distinct dedicated operators which may require *se* in their encoding. Thus, clauses with *se* are characterized by a derivational reciprocity/reflexivity ambiguity, but *se* is not lexically ambiguous itself.

In support of this proposal, I will present data from different Romance languages exhibiting the distinctions between lexical and grammatical strategies and reciprocal and reflexive interpretations, and I will systematically study how all these meanings can still appear without *se*. A language that is particularly convenient for illustrating these facts is Brazilian Portuguese. In Brazilian Portuguese (BP), the clitic *se* is productive and it is associated to reciprocal and reflexive interpretations, as in other Romance languages. However, there is a handful of verbs where *se* may optionally be omitted, and that receive a reciprocal interpretation (6a) or a reflexive interpretation (6b) with zero morphology. Such predicates receive the same array of interpretations of corresponding lexical intransitive predicates in English. For instance, (6a) denotes a 'single-event' configuration, where the girls must have been involved in a mutual kiss. Crucially, no polysemy emerges in these cases: sentence (6a) below is unambiguously reciprocal and (6b) is unambiguously reflexive.

(6) a. As meninas beijaram. (BP)
the girls kiss.PST.3PL
'The girls kissed.'

b. As meninas vestiram.
the girls dress.PST.3PL
'The girls got dressed.'

The expression of reciprocity and reflexivity with zero morphology might seem peculiar for a Romance language. However, I will show that Brazilian Portuguese finite clauses expose a mechanism that is general to Romance languages. I argue that predicates that can receive reciprocal or reflexive interpretations without *se*, like 'kiss' (6a) or 'get dressed' (6b), have an intransitive reciprocal and reflexive entry respectively, and that similar predicates exist across Romance languages, manifesting themselves without *se* in various constructions that differ per language. The peculiarity of Brazilian Portuguese is that this happens in simple finite clauses, whereas in the majority of Romance languages it only happens in some non-finite constructions, such as causative or absolute clauses. Despite this syntactic variation, I generalize that in all Romance languages, whenever a verb manifests a reciprocal or reflexive meaning in some construction without *se* and without any overt reciprocal or reflexive element, that verb has a lexical intransitive entry that is either inherently reflexive or inherently reciprocal, and has the semantic characteristics of similar intransitives in English.

There is something else that Brazilian Portuguese reveals in finite clauses: not only lexical, but also grammatical reciprocity and reflexivity can emerge without *se*, as long as an overt reciprocal or reflexive element is present, as illustrated in example (7) below. In the presence of a pronominal reciprocal element such as *uma a outra* 'one another', any transitive verb may denote reciprocal configurations without *se*. This includes the case of *descrever* 'describe' (7), a transitive predicate that does not allow reciprocal interpretations with zero morphology (8). Unsurprisingly, no reciprocity/reflexivity polysemy emerges in (7). The clause is unequivocally reciprocal and has the interpretation typical of grammatical reciprocity, with multiple unidirectional events (for instance, with each girl in the subject describing another). I argue that comparable configurations exist across Romance languages. In the same constructions where lexical reciprocity and reflexivity emerge without *se*, grammatical reciprocity and grammatical reflexivity are also licensed without *se*, and without leading

to ambiguity between these two interpretations.

(7) As meninas descreveram uma a outra. (BP)
the girls describe.PST.3PL one the other
'The girls described each other.'

(8) * As meninas descreveram. (BP)
the girls describe.PST.3PL

In the upcoming chapters we will explore these generalizations for various Romance languages and I will show that they fit within an analysis where *se* itself is not directly responsible for reciprocal or reflexive semantic effects. With grammatical reciprocals and reflexives, *se* supports derivational ambiguity: it accompanies predicates that have undergone valence-reduction through a reciprocal or reflexive operator. In certain Romance languages and constructions - like Italian finite clauses (5) - *se* is also mandatory for verbs like 'kiss' or 'bathe', that lexically manifest the familiar alternation between transitive and intransitive reciprocal/reflexive entries. Yet, in each Romance language that we will examine, there are constructions that allow the omission of *se* while maintaining reciprocal or reflexive readings. The specific constructions where this is possible vary per language; I will not analyze the syntactic parameters that govern this variation within Romance, but I will present a semantic foundation that is useful for any account of language variation among the Romance languages.

The study of Romance lexical reciprocal verbs will not solely rely on reciprocal interpretations without *se*, but I will also show that these predicates are characterized by distinctive properties that cannot be found in grammatical reciprocals. For the sake of this introduction, let us just consider the availability of the reciprocal 'with'-construction. The Italian verb *baciare* 'kiss' may receive a reciprocal interpretation not only with a plural subject - as we already saw in (5) - but also in a 'with'-construction, where one of the participants in encoded as the syntactic subject, and another is introduced by the comitative preposition *con* 'with', as illustrated by example (9) below.

(9) Mary si bacia con Laura. (Italian)
Mary SE kiss.PRS.3SG with Laura
'Mary is kissing with Laura.'

I use the term *reciprocal 'with'-alternation* to refer to the possibility of a verb to get a reciprocal interpretation both with a plural subject and in a 'with'-

construction. In Italian, this alternation is not possible for the verb *descrivere* 'describe', which leads to ungrammaticality in the 'with'-construction (10). I will argue that *descrivere* (unlike *baciare* 'kiss') does not have a lexical reciprocal entry, and the ungrammaticality of (10) follows from this characterization.

(10) * Mary si descrive con Laura. (Italian)
Mary SE describe.PRS.3SG with Laura

Similarly, in English, some verbs that may express reciprocity with zero morphology (11a) may undergo the 'with'-alternation (11b). By contrast, verbs without a lexical reciprocal entry (12a) are ungrammatical in the reciprocal 'with'-construction (12b).

(11) a. Mary and Laura met.
b. Mary met with Laura.

(12) a. * Mary and Laura described.
b. * Mary described (each other) with Laura.

A correlation between lexical reciprocal entries and availability of the reciprocal 'with'-construction has been observed across several languages (Reinhart and Siloni, 2005; Siloni, 2012). Due to the widespread nature of this pattern, the 'with'-alternation has been often regarded as a property of lexical reciprocals, and linked to the 'single-event' interpretation typical of this class of verbs (Dimitriadis, 2008a; Siloni, 2012).

However, this generalization does not hold cross-linguistically. In Swahili, the 'with'-alternation is not restricted to a closed class of predicates. In this language, reciprocity is expressed by the productive verbal morpheme *-an*, which can reciprocalize any transitive verb. All predicates bearing the affix *-an* are felicitous in the reciprocal 'with'-construction, including verbal meanings that are not typically associated to reciprocal configurations, and have no lexical reciprocal entry in other languages. For instance, the verb *pongeza* 'congratulate', which does not have a lexical reciprocal entry in English or Romance, undergoes the reciprocal 'with'-alternation in Swahili. This is illustrated in (13) below: it can lead to reciprocal interpretations in a clause with a conjoined subject (13a) or in a 'with'-construction (13b).

(13) a. Mary na Laura wa-li-pongez-an-a. (Swahili)
Mary and Laura SM.3PL-PST-congratulate-RECP-FV
'Mary and Laura congratulated each other.'

b. Mary a-li-pongez-an-a na Laura.
Mary SM.3SG-PST-congratulate-RECP-FV with Laura
'Mary and Laura congratulated each other.'
(lit. 'Mary congratulated each other with Laura.')

Swahili, just like most Romance languages, does not make an overt distinction between lexical and grammatical reciprocal processes: the morpheme *-an* is the only verbal suffix for reciprocity. For this reason, it is not straightforward to determine whether Swahili configurations as in (13) are the outcome of a lexical or a grammatical process: any claim that lexical or grammatical reciprocals (or both) undergo the 'with'-alternation must rely on an independent categorization of these strategies. I will provide a characterization of lexical and grammatical reciprocity in Swahili, based on a set of features that are distinctive of each strategy. I will present evidence showing that grammatical reciprocity is expressed by the intransitivizing morpheme *-an*, whereas lexical reciprocals are intransitive predicates where *-an* is lexicalized as part of the verb stem. Relying on this newly-established distinction between two different strategies, I will argue that the 'with'-alternation in Swahili can be undergone by both lexical and grammatical reciprocals. This suggests that the 'with'-alternation is not universally restricted to lexical reciprocal entries.

What are the implications of this observation for the cross-linguistic characterization of lexical reciprocals? Should we discard the restriction of the 'with'-construction to lexical reciprocal predicates in Romance and English as a phenomenon that is peripheral to the question of lexical reciprocity? Or does Swahili represent an exception to an otherwise well-established characterization? If not, what determines whether in a given language grammatical reciprocal verbs can undergo the reciprocal 'with'-alternation?

To answer these questions, I will propose the generalization that the 'with'-construction is possible with predicates where reciprocity is expressed through verbal morphology. In languages like Swahili, grammatical reciprocals allow the 'with'-alternation as they convey reciprocity with verbal morphology. However, in languages where grammatical reciprocity is not derived through verbal morphology, the 'with'-alternation is restricted to lexical intransitives, where reciprocity is due to the inherent meaning of the verbal base. Therefore, this alternation can prove valuable for the characterization of lexical reciprocals in languages like Romance, but it should not be mistaken for a cross-linguistic property of this class of verbs.

In the rest of the dissertation, I will elaborate upon the proposals that are outlined above. We will explore data and patterns from different languages, all ultimately boiling down to one generalization: in all the languages that we will examine (English, Romance or Swahili), lexical and grammatical reciprocity and lexical and grammatical reflexivity are all operational and semantically distinct. The difference between these languages only lies in the manifestation of overt elements that accompany grammatical reciprocal and reflexive meanings, and the extent to which these elements must also accompany lexical reciprocal and reflexive forms.

Chapter 2 focuses on the distinction between lexical and grammatical reciprocity in Romance, mainly revolving around Brazilian Portuguese, Catalan, Italian and Spanish. I will show that across these languages there is a stable class of predicates that manifest reciprocal interpretations without *se* across different constructions, and have the semantic properties that are associated to lexical reciprocals cross-linguistically. This chapter supports the claim that both lexical and grammatical reciprocity exist in Romance, and that neither of them is directly expressed by *se*: lexical reciprocity arises from the inherent meaning of lexical intransitive predicates, whereas grammatical reciprocity is due to reciprocal operators that are licensed by *se* and that may be overt or covert.

Chapter 3 discusses the distinction between reciprocity and reflexivity in Romance languages. Here, I will propose that each of these interpretations is realized by a dedicated operator. Providing empirical support from Italian and Brazilian Portuguese, I will argue against an underspecification approach that treats reciprocity and reflexivity as two instantiations of the same lexical meaning. I will show that, contra the predictions of the underspecification analysis, these two meanings are not concurrently accessible to native speakers: *se*-clauses with plural antecedents are not in line with interpretations that are partially reciprocal and partially reflexive. The chapter also reveals that the semantics of lexical reflexive predicates influences the availability of partially reciprocal and partially reflexive interpretations: such interpretations do emerge with predicates that have a lexical reflexive entry. I will argue that this is due to the intrinsic meaning of lexical reflexivity not requiring strict identity between agent and patient, but that such cases have little to say about the general polysemy

between reciprocity and reflexivity. Thus, lexical reflexive predicates constitute a confound that empirical studies on the topic should be controlling for. I will show that once this confound is removed, there is no substantial evidence for an underspecification approach of grammatical reciprocity/reflexivity in Romance.

Chapter 4 focuses on Bantu languages, concentrating on lexical and grammatical reciprocity in Swahili. I will provide a characterization of these two strategies, showing that – despite the identical surface form – they can be distinguished based on semantic, syntactic and morphological properties. I will argue in favor of a twofold account of the morpheme *-an*: (i) as a valence-reducing operator yielding grammatical reciprocity, and (ii) as a marker with no reciprocal semantics of its own, lexicalized as part of the verb stem of intransitive reciprocal predicates. The chapter reveals that there is semantic uniformity across the expression of lexical reciprocity in Swahili and in Romance, but there are also morphosyntactic dissimilarities, including the possibility to undergo the reciprocal 'with'-alternation.

Chapter 5 revolves around the reciprocal 'with'-alternation, providing an overview of its cross-linguistic distribution. In contrast to previous proposals, I will argue that the 'with'-alternation is not restricted to the 'single-event' interpretation typical of lexical reciprocals, nor to languages where the comitative preposition 'with' and the NP conjunction 'and' are realized with the same form. Instead, I will review data showing that the alternation is productive across unrelated languages that express grammatical reciprocity through derivational morphology. The chapter is mostly descriptive and it raises new questions, but it provides tangible input to future works – theoretical or typological – on the study of reciprocals in languages of the world.

Chapter 6 is our final wrap-up. I will provide some concluding remarks, taking stock of the contributions of this dissertation and of the open questions that are left for further research.

CHAPTER 2

Lexical reciprocity in Romance languages

1 Introduction

The way in which languages express reciprocal meanings received attention both in theoretical linguistics and typological studies (Frajzyngier and Walker, 2000; Nedjalkov et al., 2007; König and Gast, 2008; Evans et al., 2011). Two reciprocal strategies have been identified cross-linguistically: lexical reciprocity and grammatical reciprocity.

Lexical reciprocity is expressed by a restricted class of intransitive predicates without argumental pronominal elements or other productive derivational strategies. In English, lexical reciprocity is realized with zero morphology (14). This kind of reciprocity is restricted to verb meanings in the conceptual domain of 'naturally reciprocal' events (Kemmer, 1993) and is not possible with just any verb (15).

(14) Mary and Lisa kissed.

(15) * Mary and Lisa described.

Grammatical reciprocity is the productive strategy which involves items that express a reciprocal meaning by saturating an argument position. In

English, grammatical reciprocity requires the elements *each other* or *one another* (Dalrymple et al., 1998) as in (16)-(17).

(16) Mary and Lisa kissed each other.

(17) Mary and Lisa described each other.

Lexical and grammatical reciprocals lead to different interpretations (Kemmer 1993; Carlson 1998, *inter alia*): the grammatical reciprocal construction in (16) can be interpreted with different unidirectional events (for instance, Mary and Lisa kissing each other consecutively on the forehead), whereas its intransitive counterpart in (14) necessarily refers to a single collective event (one mutual simultaneous kiss). This semantic contrast reflects a difference in argument structure: grammatical reciprocals are treated as predicates with two arguments bound by a reciprocity operator, and lexical reciprocals as intransitive predicates with one semantically plural argument (Langendoen and Magloire, 2003; Dimitriadis, 2008a; Winter, 2018).

In several languages, the lexical strategy is overtly manifested, using morphological forms that characterize reciprocal meanings. For instance, while in English and Dutch lexical reciprocals appear with zero morphology (Reinhart and Siloni, 2005), in Hebrew they are usually realized in the *hitpael* template (Doron, 2003), in Modern Greek with non-active morphology (Papangeli, 2004; Doron and Rappaport Hovav, 2009) and in Hungarian with the verbal marker *-oz* (Rákosi, 2008).

In some languages, however, reciprocals do not seem to show any clear distinction between lexical and grammatical processes. This is the case with Romance languages, where the clitic *si*/*se* (in its different realizations, henceforth *se*) is generally required in finite clauses with transitive verbs that receive a reciprocal interpretation. Such clauses typically receive an additional reflexive interpretation, as illustrated in the Italian example in (18).[1]

[1]The content of this chapter, and partly of Chapter 3, is based on the paper 'Palmieri, G., R. Basso, J. Nieto i Bou , Y. Winter, and J. Zwarts. (submitted) Lexical and grammatical arity-reduction: the case of reciprocity in Romance languages.' Unless otherwise specified, the data and the judgments from the Romance languages in these two chapters rely on the authors' native intuitions. These judgments, as well as all judgments on examples in other languages, are supported by intuitions of native speaker consultants or from the literature.

(18) Mary e Lisa si abbracciano/ descrivono. (It)
Mary and Lisa SE hug.PRS.3PL describe.PRS.3PL
i. 'Mary and Lisa hug (each other/themselves).'
ii. 'Mary and Lisa describe each other/themselves.'

From the surface realization of sentences like (18), it is not possible to determine whether their interpretation is derived using lexical intransitives (such as English *hug* or Hebrew forms with *hitpael*) or using complex transitive constructions with a reciprocal/reflexive operator.

A similar puzzle appears with Romance reflexives. Unlike the English distinction between intransitive usages of verbs like *wash* and their transitive usage in reflexive constructions like *wash oneself* or *describe oneself*, Italian has no distinct marking for an intransitive reflexive reading of *wash*. It supports a finite form as in the following plural sentence, whose interpretation is either reflexive or reciprocal:

(19) Mary e Lisa si lavano/ descrivono. (It)
Mary and Lisa SE wash.PRS.3PL describe.PRS.3PL
i. 'Mary and Lisa wash (themselves/each other).'
ii. 'Mary and Lisa describe each other/themselves.'

The possible existence of lexical reciprocals and reflexives in Romance has been considered in the literature (Labelle, 2008; Doron and Rappaport Hovav, 2009; Siloni, 2012), but little attention has been dedicated to their characterization. Given the lack of morphosyntactic cues enabling their immediate identification, this is not a straightforward task. Furthermore, due to the uncertain distinction between grammatical and lexical reciprocal/reflexive processes, the role of the clitic *se* has been predominantly studied in relation to the grammatical strategy.

In this chapter, I will show that the lexical/grammatical distinction systematically appears in Romance, with similar effects to those familiar from other languages. I will characterize lexical reciprocals in Romance, discerning them from grammatical reciprocals, and I will study the contribution of *se* to these two different strategies.

I will substantiate the argument in favor of a class of Romance predicates that have a transitive alternate and an intransitive reciprocal entry, similarly to other languages. Despite the absence of an overt distinction in Italian finite clauses like (18), we will see that the lexical/grammatical reciprocity distinction can be

unveiled across Romance languages. For example, in Brazilian Portuguese (BP), the vast majority of transitive verbs require *se* to express reciprocity in finite clauses (20), but there is a handful of verbs that allow a reciprocal interpretation in their bare intransitive form. One example is *beijar* 'kiss' in (21): with *se* it can receive a reflexive or a reciprocal interpretation (21a), whereas without *se* it is unambiguously reciprocal (21b), and it denotes a mutual collective kiss, like the English lexical reciprocal form in the free translation.

(20) Mary e Lisa *(se) descreveram. (BP)
Mary and Lisa SE describe.PST.3PL
'Mary and Lisa described each other/themselves.'

(21) a. Mary e Lisa se beijaram. (BP)
Mary and Lisa SE kiss.PST.3PL
'Mary and Lisa kissed each other/themselves.'

b. Mary e Lisa beijaram.
Mary and Lisa kiss.PST.3PL
'Mary and Lisa kissed.'

I propose that reciprocal interpretations without *se* as in (21b) are due to the lexical meaning of the intransitive verb stem ('kiss'), and that predicates similar to *beijar* exist in all Romance languages. Focusing primarily on data from BP, Catalan, Italian and Spanish, I will show that the possibility of expressing reciprocity without *se* in (21b) is representative of a broader pattern in Romance. I will present constructions where verbs with similar meanings to English intransitives like *hug* lead to reciprocal interpretations without *se* in different Romance languages. The peculiarity of BP within the Romance family is that *se* may be omitted in simple finite clauses, whereas in the majority of Romance languages this only happens in some non-finite constructions. I argue that this variation is solely syntactic. However, the semantic characterization of lexical reciprocal predicates is stable within Romance, and it is independent of this syntactic variation. Whenever a Romance verb manifests a reciprocal meaning in some construction without *se* and without any overt reciprocal element, the verb has a lexical reciprocal entry with the semantic characteristics of reciprocal intransitives in English.

After presenting evidence for the existence of lexical reciprocity in Romance, I will consider cases of grammatical reciprocity (and reflexivity), and the role of *se* in their derivation. I will show that in the syntactic environments where lexical reciprocity emerges without *se*, the grammatical strategy is also possible without

this element: grammatical reciprocity and reflexivity are possible without *se* for all transitive verbs, provided that they appear with overt reciprocal or reflexive operators. For instance, we saw in (20) that BP *descrever* 'describe' cannot lead to a reciprocal interpretation with zero morphology. Yet, with the element *uma a outra* 'one another', this verb does allow the omission of *se*. Sentence (22) below has an unambiguously reciprocal interpretation, where each of the two individuals in the denotation of the subject described the other.

(22) Mary e Lisa (se) descreveram uma a outra. (BP)
Mary and Lisa SE describe.PST.3PL one the other
'Mary and Lisa described each other.'

Taken together, these facts lead to the proposal that *se* itself is never the semantic source of reciprocity: elements such as BP *um o outro* have the meaning of reciprocal operators, whereas the reciprocal interpretation of lexical verbs such as *abraçar* 'hug' is due to the inherent intransitive meaning of the verb stem. I will show that analyses of *se* as a marker of valence-reducing operations (Reinhart and Siloni, 2005) or as a reciprocal anaphor (Doron and Rappaport Hovav, 2009) fail to account for the appearance of *se* with predicates that are inherently reciprocal, and fail to capture instances of grammatical reciprocity that emerge without *se*. By contrast, the findings are consistent with Labelle's (2008) proposal that *se* is a functional head projection, more specifically Voice. However, against Labelle, I argue that *se* never carries itself the meaning of a reciprocal or reflexive operator. I propose that the role of *se* is purely syntactic: it is a Voice head that marks reflexive and reciprocal predicates. Whether *se* is obligatory depends on the syntax of the clause and on the presence of other elements that mark reflexive/reciprocal interpretations (e.g., BP *uma a outra*). In the absence of a lexical intransitive entry or of an overtly realized reflexive/reciprocal marker, *se* is required for reflexive/reciprocal marking, *à la* Reinhart and Reuland (1993). In the presence of a lexical intransitive entry or of an overt reflexive/reciprocal element, the appearance of *se* solely depends on syntactic requirements that determine whether *se* is obligatory (e.g. in Italian finite clauses), optional (BP finite clauses) or disallowed (Italian causative clauses).

This chapter is structured as follows. In §2 I provide an overview of previous studies on lexical reciprocity in Romance languages. In §3 I describe the distribution of *se* across different constructions in four Romance languages, and I

identify a group of predicates that may express reciprocity all by themselves, without *se*. In §4 I show that Romance predicates that express reciprocity without *se* have semantic properties that are cross-linguistically associated with lexical reciprocity: reciprocal nominalization (§4.1), semantic drift (§4.2), pseudo-reciprocal interpretation (§4.3), reciprocal 'with'-alternation (§4.4) and acceptability with singular group NPs (§4.5). In §5 I explore instances of grammatical reciprocity and reflexivity that emerge without *se*. In §6 I present an analysis of *se* as a functional head projection. In section §7 I provide general conclusions.

2 Terminology and previous studies

The term 'naturally reciprocal' has been used in the typological literature since Lichtenberk (1985) and Kemmer (1993) to refer to predicates that typically denote reciprocal configurations, and that are often realized with morphological markers that are associated with the middle voice. In Haspelmath (2007) and Knjazev (2007), the additional term 'lexically reciprocal' is employed to refer to the sub-group of the 'naturally reciprocal' predicates that express reciprocity without any overt marking. A more encompassing definition of 'lexical reciprocals' is provided by Nedjalkov (2007), who defined them as verbs "whose meaning is not a mere sum of the meaning of the base and the meaning of 'each other'" (p.14).

Following Nedjalkov's definition of lexical reciprocity, I use this term to refer to predicates whose reciprocal interpretation does not arise from a productive morphosyntactic operation, but from an inherent collective meaning of the verb's intransitive entry. Thus, predicates like *kiss* are assumed to have two distinct entries: a transitive entry (23a) and an intransitive, lexical reciprocal, alternate (23b).

(23) a. Mary kissed Lisa.
b. Mary and Lisa kissed.

Although many lexical reciprocals have a transitive alternate, reciprocal intransitive meanings may also arise without such an entry. For example, the intransitive verb *talk* does not have a transitive alternate, but an alternate that takes a prepositional complement (24a). The meaning relation between

the two *talk* alternates is parallel to the *kiss* alternation in (23). Accordingly, I characterize the collective use of intransitive *talk* in (24b) as lexical reciprocal.

(24) a. Mary talked to Lisa.
b. Mary and Lisa talked.

I oppose this notion of lexical reciprocity to *grammatical* reciprocity: a process whereby reciprocity is derived through a productive strategy, as with *each other* in English. This terminology builds on Nedjalkov (2007) and Haspelmath (2007), who defined as *grammatical reciprocals* the constructions where reciprocity is derived through some reciprocity element. Unlike lexical reciprocity, grammatical reciprocity in English is possible with all transitive verbs and verbs with prepositional complements, whether they have a lexical reciprocal alternate (25a)-(25b) or not (25c).

(25) a. Mary and Lisa kissed each other.
b. Mary and Lisa talked to each other.
c. Mary and Lisa described each other.

When contrasting lexical reciprocity with grammatical reciprocity, I rely on the theoretical assumption that lexical reciprocal meanings are associated with the intransitive entry, and do not necessarily rely on a (dedicated) morphosyntactic marking. This assumption leaves open the possibility that languages may have lexical reciprocals that are not as uniformly distinguished from grammatical reciprocals as in English.

Notably, in Romance languages there is no clear morphosyntactic marking that is reserved to lexical reciprocals, and verbs with a transitive alternate usually require the element *se* in order to get a reciprocal (or reflexive) interpretation. This clitic is not restricted to reflexivity and reciprocity, and it is also used to convey other typical functions of middle forms, including unaccusative, impersonal, passive and subject-experiencer configurations (Cinque, 1988; Chierchia, 1995; Dobrovie-Sorin, 1998; Rivero, 2001; d'Alessandro, 2008; Dobrovie-Sorin, 2017). The role of the *se* clitic in Romance has been extensively studied in works investigating valence-reducing operations (Grimshaw 1982; Everaert 1986; Reinhart and Reuland 1993; Reinhart and Siloni 2005; Doron and Rappaport Hovav 2009; Labelle 2008; Labelle and Doron 2010, *inter alia*). However, the identification and characterization of lexical reciprocal predicates

in Romance has not received much attention. This class of verbs has only been occasionally taken into account in theories of Romance reflexives and reciprocals (generally focusing on the former), and it is often treated as an orthogonal question to the grammatical realization of valence-reducing operations.

Reinhart and Siloni (2005) proposed a 'lexicon-syntax' parameter, by which arity-reducing operations in any language may apply in the lexicon or in the syntax. Thus, in Reinhart and Siloni's approach, the distinction between lexical and grammatical reciprocity/reflexivity plays a cross-linguistic role, but they did not elaborate on lexical/grammatical distinctions within one and the same language. Reflexivization is claimed to take place through the *bundling* operation, that maps an internal θ-role onto the external argument to form a complex θ-role. This operation of arity-reduction is illustrated in (26): reflexivization bundling turns a two-place predicate (with two θ-roles) into a one-place predicate (with one complex θ-role).

(26) *Reflexivization bundling:*
$[\theta_i][\theta_j] \rightarrow [\theta_i - \theta_j]$, where θ_i is an external θ-role
(Reinhart and Siloni, 2005, p.400)

In 'lexicon languages', such as English, Dutch or Hebrew, reflexivization and reciprocalization are not productive operations, and lexical reflexive and reciprocal predicates are distinguishable from their counterparts with anaphors. Reciprocal predicates formed in the lexicon are characterized by the absence of ambiguity with reflexive interpretations (Reinhart and Siloni, 2005), by a 'single-event' interpretation, and by the availability of the reciprocal 'with'-construction (Siloni, 2012).[2] 'Lexicon languages' are opposed to 'syntax languages', where the reflexive/reciprocal strategy is productive and is assumed to take place in the syntax. This is for instance the case in Romance languages: here, Reinhart and Siloni (2005) proposed that the clitic *se* is functional for the bundling operation. This element is therefore assumed to operate on the argument structure, and to be insensitive to the semantics of the verb. Within this account, it is observed that there may be instances of lexical reciprocals in syntax languages: Siloni (2012) noted that the French verb *se battre* 'quarrel' displays syntactic and semantic characteristics typical of lexical reciprocals (such as the availability of the reciprocal 'with'-construction and a 'single-event' interpretation). How-

[2]These properties will be closely examined in relation to Romance reciprocals in §4.3 and §4.4.

ever, no special treatment is reserved to the role of *se* with respect to the reciprocalization of such predicates: *se* is uniformly analyzed as a marker of valence-reduction, regardless of the verbs it combines with. This leaves a gap in the theory: without more semantic assumptions, this does not account for the differences between verbs like *se battre* and reciprocal verbs that are formed in the syntax.

Labelle (2008) proposed an advancement of the bundling theory, providing a unified analysis of *se* that accounts for cases where this element is responsible for reciprocal interpretations, as well as for cases where reciprocal readings originate elsewhere. Labelle (2008) observed that the French *se* obligatorily appears with verbs that express reciprocity or reflexivity on their own, such as predicates prefixed with *entre-* or *auto-*, respectively. Labelle assumed that *entre-* or *auto-* bind the internal and external arguments, yielding a verb entry with a reciprocal/reflexive interpretation. For instance, *entreregarder* is considered to already denote a mutual configuration, but it nonetheless requires *se* (27).

(27) a. Les participants s' entreregardèrent. (French)
The participants SE between.look.at.PST.3PL
'The participants looked at one other.'

b. * Les participants entreregardèrent.
The participants between.look.at.PST.3PL
(Labelle, 2008, p.841)

The possibility of appearing with reciprocal verbs like *entreregarder* rules out a treatment of *se* as an arity-reducing morphological unit. However, *se* also appears with simple transitive verbs, and in these cases it is considered responsible for the reciprocal interpretations. To address this distribution, Labelle (2008) proposed an analysis of the French *se* as a functional head projection that introduces the external argument x through the agent role (following Kratzer 1996) and identifies it with the object argument of the predicate P (28).

(28) $\lambda P \lambda x \lambda e[P(e,x) \wedge \text{Agent}(e,x)]$
(Labelle, 2008, p.844)

This treatment is meant to unify cases where *se* is the source of reciprocity and cases where it is semantically redundant. With transitive verbs, *se* is considered responsible for expressing reciprocity (co-referencing external and

internal arguments), whereas with predicates prefixed by *entre-*, it is assumed that *se* does not contribute to the reciprocal interpretation (which is instead provided by the prefix *entre-*). Yet, in this latter case, *se* is considered obligatory to ensure a coherent reading.[3] While Labelle (2008) recognized that *se* may combine with verbs that are already reciprocal, this observation only relied on predicates bearing the productive prefix *entre-*; lexical reciprocal verbs are not considered in the account, and no diagnostics for their identification is provided. One shortcoming of the reliance on grammatical reciprocity is that the analysis is based on the assumption that constructions with *se* are semantically transitive: there are always two distinct thematic roles, that are bound at some stage in the derivation (either by prefixation or by *se*). Semantically, this view is suitable for grammatical reciprocity, but it is in conflict with more recent observations on the meaning of lexical reciprocals, according to which the 'single-event' reading must originate from an intransitive entry (Dimitriadis, 2008b; Siloni, 2012; Winter, 2018).

In Doron and Rappaport Hovav (2009), the distinction between lexical and grammatical reflexive/reciprocal entries served as a starting point for the development of a twofold account of the Romance *se*. Doron and Rappaport Hovav took the reflexive French *se* as a case study, and proposed a syncretism of this element between reflexive morphology and reflexive anaphor. The authors argued that the cases in which *se* combines with transitive predicates are instances of anaphoric binding. However, an analysis as a marker of argument identification was reserved to *se* when it is associated with lexical reflexive or reciprocal predicates. One of the proposed ways to identify such verbs are nominalizations: Doron and Rappaport Hovav (2009) noted that some lexical reciprocals, such as *entendre* 'get along' (29a), have a corresponding nominal form with an inherently collective meaning, such as *entente* 'agreement' (29b). Another diagnostics is the possibility of receiving a reciprocal interpretation without *se* in causative constructions (30).

(29) a. Paul et Marie s' entendent bien. (French)
Paul and Marie SE understand.PRS.3PL well
'Paul and Marie get along well.'

[3]These assumptions will be further discussed in §6, along with a more comprehensive overview of Labelle (2008).

b. *entente* 'agreement'

(Doron and Rappaport Hovav, 2009, p.98)

(30) Valérie Lemercier fait embrasser l' assemblée. (French)
Valérie Lemercier make.PRS.3SG kiss.INF the audience
'Valerie Lemercier makes the people in the audience kiss.'
(Doron and Rappaport Hovav, 2009, p.96)

However, as we will see throughout the chapter, Romance causative constructions (as well as other syntactic environments) also allow *grammatical* reciprocity without *se* under certain circumstances. This fact challenges Doron and Rappaport Hovav's twofold account of *se*, and will constitute a major element in the evidence that leads us towards an alternative, unified, approach to *se*.

In conclusion, despite the overall agreement on the existence of a class of lexical reciprocals in Romance, there is currently no consensus on general tests for identifying those Romance predicates that have a lexical reciprocal (or reflexive) entry, nor on the theoretical implications of the existence of this class of verbs. The works outlined above propose different analyses of *se* and of its interaction with lexical reciprocity. However, all these works agree on the idea that *se* is responsible for deriving grammatical reciprocity when it combines with verbs that have no reciprocal meaning of their own. In contrast with these previous studies, I will propose that *se* itself does not make a sentence reflexive or reciprocal, but it is the syntactic marker of a verb phrase that is already reduced in arity, either lexically or due to an operator.

3 Lexical reciprocity without *se*

Across Romance languages, we can find predicates that express reciprocity without *se* (see Godoy 2008 for BP and Vázquez and Fernández-Montraveta 2016 for Spanish). The Italian predicate *chiacchierare* 'chat' in (31a) receives a collective interpretation in its bare intransitive entry and cannot combine with *se*. This configuration is restricted to verbs that do not have a transitive alternate: *chiacchierare* 'chat' cannot take a direct object (31b).[4]

[4]These predicates include, but are not limited to, verbs bearing the Latin reciprocal/sociative prefix *com-* (Zaliznjak and Shmelev, 2007), as in *competere* 'compete' or *convivere* 'cohabit' in Italian.

(31) a. Mary e Lisa (*si) chiacchierano. (It)
Mary and Lisa SE chat.PRS.3PL
'Mary and Lisa are chatting.'

b. Mary chiacchiera *(con) Lisa.
Mary chat.PRS.3SG with Lisa
'Mary is chatting with Lisa.'

In the absence of any reciprocal marking, the reciprocal interpretation of (31a) must originate from the verb's entry. Thus, verbs like Italian *chiacchierare* 'chat' fit the definition of lexical reciprocals. These verbs also fit within the universal proposed by Haspelmath (2007) that all languages have predicates whose meaning is inherently reciprocal, and that may express reciprocity all by themselves, without any grammatical marking.

However, it is unclear whether the categorization of lexical reciprocals in Romance may also be extended to predicates with a transitive alternate. As shown by the Italian examples in (32) below, verbs with a transitive entry (32a) require *se* to describe reciprocal configurations (32b), regardless of whether they denote events typically associated to Kemmer's class of 'naturally reciprocal' predicates ('hug') or not ('describe').

(32) a. Mary abbraccia/ descrive Lisa. (It)
Mary hug.PRS.3SG describe.PRS.3SG Lisa
'Mary hugs/ describes Lisa.'

b. Mary e Lisa *(si) abbracciano/ descrivono.
Mary and Lisa SE hug.PRS.3PL describe.PRS.3PL
'Mary and Lisa hug/describe each other/themselves.'

The situation is similar in the vast majority of Romance languages: predicates with a transitive entry consistently require *se* in finite clauses with a reciprocal interpretation. Despite the ubiquity of this phenomenon, in the rest of this section I will show that in all four Romance languages considered in this chapter, there are constructions where certain verbs with a transitive alternate do express reciprocity without *se*. As we will see, the meanings of these Romance verbs are typical of those meanings that are cross-linguistically associated with 'naturally reciprocals', and they give rise to similar semantic effects.

3.1 Finite clauses

In BP finite clauses, most transitive verbs require *se* for receiving a reciprocal or reflexive interpretation. When *se* appears with a transitive verb and a plural subject, BP sentences uniformly have both reciprocal and reflexive interpretations (33). This is a common situation in other Romance languages as well. However, with a restricted class of BP transitive verbs, reciprocal interpretations can also emerge without *se*. For instance, the verb *abraçar* 'hug' expresses a reciprocal meaning both with *se* (34a) and without *se* (34b).[5]

(33) Mary e Lisa *(se) descreveram. (BP)
Mary and Lisa SE describe.PST.3PL
'Mary and Lisa described each other/themselves.'

(34) a. Mary e Lisa se abraçaram. (BP)
Mary and Lisa SE hug.PST.3PL
'Mary and Lisa hugged (each other/themselves).'

b. Mary e Lisa abraçaram.
Mary and Lisa hug.PST.3PL
'Mary and Lisa hugged.'

Importantly, the two sentences in (34) above differ semantically. The *se*-clause in (34a) displays the common Romance reflexivity/reciprocity ambiguity: it holds true if the two individuals in the denotation of the subject each hugged the other or each hugged herself.[6] The meaning of the bare intransitive in (34b) is more specialized: it is only in line with one mutual, collective hug. For instance, unlike (34a), (34b) would not support a scenario with multiple unidirectional

[5]Different BP speakers have different judgements on the acceptability of sentences without *se* like (34b). However, all BP speakers that were consulted accepted reciprocity without *se* for some or other verbs of the list in (43) below. It is widely recognized that BP has a large number of different varieties according to geographic and sociolinguistic parameters (Cardoso et al., 2011), and this variation has been also shown to affect the distribution of *se* (Teixeira and da Silva, 2019). However, this variability does not threaten the general proposal. I assume that if a BP speaker ever accepts a reciprocal interpretation without *se* (and without another overt reciprocal element), then she accepts it with at least some of the verbs that cross-linguistically have intransitive reciprocal meanings (e.g., 'kiss' or 'hug'). Conversely, verbs like 'describe', which typically only have a transitive entry across languages, uniformly require *se* (or another overt reciprocal element) in order to express reciprocity.

[6]The term 'ambiguity' is not employed here in a loose sense. In Chapter 3, I will elaborate on the proposal that *se*-clauses are truly ambiguous between reflexivity and reciprocity, not underspecified.

hugging events (for instances, where Mary hugs Lisa while Lisa is asleep, and later Lisa hugs Mary while Mary is asleep). Essentially, (34b) only supports a 'single-event' interpretation, similarly to its intransitive counterpart in English.

The possible omission of *se* in BP finite clauses has been observed in the literature for constructions other than reciprocals (Nunes, 1995; Galves, 2001; Cyrino, 2007; Carvalho, 2018). Carvalho (2018) analyzed BP *se* as a Voice head, attributing its optionality to the existence of two forms of the same construction, one with a Voice projection and one without. Both options were reported as possible with anticausative (35a), medio-passive (35b) or impersonal (35c) readings.

(35) a. O prato (se) quebrou. (BP)
the dish SE break.PST.3SG
'The dish broke.'

b. Essa roupa (se) lava fácil.
this clothes SE wash.PRS.3SG easy
'These clothes wash easily.'

c. Nessa loja não (se) vende sapato.
in.this store NEG SE sell.PRS.3SG shoe
'This store does not sell shoes.'

(Carvalho, 2018, p.662)

3.2 Analytic causatives

Doron and Rappaport Hovav (2009) observed that some French predicates that require *se* in finite clauses, can express reflexivity or reciprocity without this element in causative constructions. This observation holds in other Romance languages too.

In Spanish, Catalan and BP analytic causatives, *se* can be used on the embedded verb to express reflexivity or reciprocity. This process is productive: virtually any transitive verb can be embedded in a causative with *se*, leading to reciprocal or reflexive interpretations. For instance, (36a) holds true if Mary and Lisa described each other or described themselves; this is parallel to the situation we have seen in BP finite clauses with *se* in (33). Spanish analytic causatives allow *se* to be omitted, but then the direct object is interpreted as the theme of the action denoted by the embedded verb (Guasti, 2006; Folli and Harley, 2007). Let us characterize this as a 'passive' interpretation. For

example, sentence (36b) means that the subject ('I') caused Mary and Lisa to be described by an unspecified agent.

(36) a. Hice describirse a Mary y Lisa. (Sp)
make.PST.1SG describe.INF.SE DOM Mary and Lisa
'I caused Mary and Lisa to describe each other/themselves.'

b. Hice describir a Mary y Lisa.
make.PST.1SG describe.INF DOM Mary and Lisa
'I caused Mary and Lisa to be described.'

There are Spanish predicates that allow a reciprocal interpretation in analytic causatives even if *se* is omitted. Let us consider the Spanish verb *abrazar* 'hug'. In finite clauses, this verb requires *se* for obtaining reflexive and reciprocal interpretations (37), and it can also get a reflexive or a reciprocal reading in causatives with *se* (38a). However, unlike *describir* in (36b), *abrazar* retains a reciprocal reading in causatives without *se*. Thus, sentence (38b) has a passive interpretation similar to (36b), but it also has a reciprocal reading where the subject ('I') caused Mary and Lisa to be involved in a mutual hug. Note that in the absence of *se*, no reflexive interpretation emerges in (38b): the sentence is only in line with a passive or a reciprocal interpretation.

(37) Mary y Lisa *(se) abrazan. (Sp)
Mary and Lisa SE hug.PRS.3PL
'Mary and Lisa hug (each other/ themselves).'

(38) a. Hice abrazarse a Mary y Lisa. (Sp)
make.PST.1SG hug.INF-SE DOM Mary and Lisa
'I caused Mary and Lisa to hug (each other/ themselves).'

b. Hice abrazar a Mary y Lisa.
make.PST.1SG hug.INF DOM Mary and Lisa
i. 'I caused Mary and Lisa to be hugged.'
ii. 'I caused Mary and Lisa to hug.'

In contrast to Spanish, Italian causatives do not tolerate *se* (Burzio, 1981; Zubizarreta, 1985). With most transitive verbs in Italian, the only possible interpretation of analytic causatives is passive, similarly to Spanish. For example, sentence (39) is interpreted as claiming that the subject ('I') caused an unspecified agent to describe Mary and Lisa. By contrast, and similarly to Spanish as well, a restricted set of Italian predicates receive a reciprocal

interpretation without *se* in causatives. For instance, with the verb *abbracciare* 'hug', sentence (40) receives a reciprocal interpretation (a mutual hug between Mary and Lisa) on top of the canonical passive interpretation (Mary and Lisa being hugged by an unspecified agent).

(39) Ho fatto (*si) descrivere (*si) Mary e Lisa. (It)
have.AUX.1SG make.PTCP SE describe.INF SE Mary and Lisa
'I caused Mary and Lisa to be described.'

(40) Ho fatto (*si) abbracciare (*si) Mary e Lisa. (It)
have.AUX.1SG make.PTCP SE hug.INF SE Mary and Lisa
i. 'I caused Mary and Lisa to be hugged.'
ii. 'I caused Mary and Lisa to hug.'

Also for Italian, the observation that causative constructions without *se* allow interpretations that typically require this element in finite clauses is not restricted to reciprocity. Burzio (1981) reported it with the anticausative *dissipare* 'dissipate' (41): it requires *se* in finite clauses (41a), but it appears without *se* if embedded under the causative *fare* 'make' (41b).

(41) a. Le nubi si sono dissipate. (It)
the clouds SE be.AUX.3PL dissipate.PTCP
'The clouds dissipated.'

b. Il vento ha fatto dissipare (*si) le nubi.
the wind have.AUX.3SG make.PTCP dissipate.INF SE the clouds
'The wind made the clouds dissipate.'

(Burzio, 1981, p.384)

3.3 Absolute constructions

In Spanish and Catalan, there is another construction where some verbs may express reciprocity by themselves: the absolute construction with participials, which does not allow *se* in these two languages. When an absolute clause presents a participial followed by an NP, its default interpretation is passive (Hernanz, 1991; De Miguel and Lagunilla, 2000). For instance, the Catalan example in (42a) states that Teo and Ana left the conference after having been thanked by an unspecified agent. However, with some verbs, a reciprocal interpretation is available in absolute constructions, although such interpretations require *se* in finite clauses. Consider for instance the verb *abraçar* 'hug': (42b) has an

interpretation where Teo and Ana are hugged by a third party, as well as an interpretation where they are involved in a mutual hug.

(42) a. Agraïts en Teo i la Ana, van sortir de la
thank.PTCP the Teo and the Ana go.PRS.3PL leave.INF of the
conferéncia. (Ca)
conference
'After being thanked, Teo and Ana left the conference.'

b. Abraçats en Teo i la Ana, van sortir de la
hug.PTCP the Teo and the Ana go.PRS.3PL leave.INF of the
conferéncia.
conference

i. 'After being hugged, Teo and Ana left the conference.'

ii. 'After hugging, Teo and Ana left the conference.'

3.4 Overview

Relying on the data presented in this section, I can characterize three groups of predicates, summarized below:

	combines with *se*	reciprocity by itself	example
reciprocal intransitive	–	+	'chat'
transitive	+	–	'describe'
reciprocal intransitive / transitive	+	+	'hug'

Table 2.1: Three classes of Romance verbs.

In the first class, we find verbs like 'chat' (31) and 'discuss'. These verbs do not have a transitive entry, they cannot combine with *se*, and they invariably express reciprocity without any grammatical marking. Similarly to their English counterparts, they get a collective interpretation in their bare intransitive entry.

In the second class, there are transitive predicates that combine with *se* and cannot denote reciprocal interpretations without *se* or other reciprocal elements. This is the case of verbs like 'thank' (33)-(39)-(42a) or 'describe'. I propose that these verbs are unambiguously transitive, hence they can only express reciprocity through a productive grammatical strategy.

Verbs in the third class have a transitive entry that combines with *se*, but in certain syntactic environments they also receive reciprocal interpretations

without *se* or any other additional element. The constructions where the omission of *se* is allowed, or even obligatory, differ per language (Table 2.2 below). Despite this syntactic variation, the meanings of these verbs are remarkably similar to those of lexical reciprocals in other languages: they all fall into Kemmer's (1993) categorization of 'naturally reciprocal' events. Furthermore, in the absence of *se* they all unambiguously lead to the type of 'single-event' readings that characterize lexical reciprocals cross-linguistically (§4.3 below). In such cases, where reciprocity emerges from the verb alone, the reflexive/reciprocal ambiguity that is typical of Romance *se*-constructions disappears. A summary of the environments where *se* can be omitted with these verbs is given in Table 2.2.

	BP	**Italian**	**Spanish**	**Catalan**
finite clauses	+	–	–	–
analytic causatives	+	+	+	+
absolutes with participial	–	–	+	+

Table 2.2: Constructions where reciprocal intransitive/ transitive verbs can receive a reciprocal interpretation without *se*.

Based on these observations, I take reciprocal readings without *se* (and without any other reciprocal marking) to be an indication of lexical reciprocity. I propose that verbs that allow reciprocity with and without *se* have two entries: a transitive entry and an intransitive entry with a reciprocal meaning. A typical example meaning of such verbs is 'hug': verbs with this meaning have a transitive alternate and can express reciprocity without *se* in all four language studied here (34b)-(40)-(38b)-(42b). A more comprehensive list is provided in (43), which includes English translations of lexical reciprocal verbs with a transitive alternate in these four languages: BP, Catalan (C), Italian (I) and Spanish (S).[7]

[7]In these languages, the omission of *se* can also be observed with some so-called 'object–oriented' reciprocals, in the terminology of Knjazev (2007). They are verbs that denote reciprocity between the object of the binary entry (ia) and the subject of the corresponding unary entry, generally with *se* (ib). The reciprocal configuration may be expressed without *se* in constructions where this element is omitted, such as causatives (ic). Some examples include 'align', 'alternate', 'mix, blend', 'intertwine', 'overlap', 'separate' or 'unite'.

(i) a. Mary ha intrecciato i fili. (It)
Mary have.AUX.3SG intertwine.PTCP the strings
'Mary intertwined the strings.'

(43) **Lexical reciprocals with a transitive alternate:**
'break up' (C,I,S); 'confer' (BP,I,S); 'cuddle' (I,S); 'date' (BP, I); 'greet' (BP); 'hug' (BP,C,I,S); 'kiss' (BP,C,I,S); 'know each other' (I); 'marry' (BP,C,I,S); 'meet' (BP,C,I,S); 'run into each other, meet accidentally' (C,I,S).

I take the possibility of a verb denoting reciprocity by itself as a diagnostic for having an intransitive reciprocal entry. However, two remarks are in order:

(i) Lexical reciprocals with a transitive alternate do require *se* in many environments other than those in Table 2.2. For example, the Italian verb *abbracciare* 'hug' expresses reciprocity without *se* in causatives (40), but does require *se* in finite clauses (32b).

(ii) As we will see in §5, all transitive verbs can receive a reciprocal interpretation without *se* in the constructions of Table 2.2, as long as there is an overt reciprocal element. An example are BP finite clauses: if the reciprocal pronoun *um o outro* 'one another' is present, *se* can be omitted with all transitive verbs (e.g. *descrever* 'describe' in (22)).

With these caveats, I define 'lexical reciprocals' in Romance as follows:

(44) **Romance lexical reciprocals**: *In a Romance language, I characterize as lexical reciprocals those verbs for which there are syntactic constructions (whose identity is determined by language-specific parameters) where a reciprocal interpretation emerges without* se *or another reciprocity element.*

With this notion of lexical reciprocals in Romance, the next section demonstrates that these predicates share semantic properties with lexical reciprocals in other languages.

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b. I fili si sono intrecciati.
the strings SE be.AUX.3PL intertwine.PTCP
'The strings intertwined.'

c. Ho fatto intrecciare i fili.
have.AUX.1SG make.PTCP intertwine.INF the strings
'I caused the strings to intertwine.'

4 Properties of Romance lexical reciprocals

The properties of lexical reciprocal predicates have been explored in many works, typological (Kemmer, 1993; Knjazev, 2007; Haspelmath, 2007), theoretical (Rákosi, 2008; Dimitriadis, 2008b; Doron and Rappaport Hovav, 2009; Siloni, 2012; Winter, 2018) and experimental (Gleitman et al., 1996; Kruitwagen et al., 2022). In this literature, there is an agreement that lexical reciprocals have a different interpretation from their grammatical counterparts, and that they may appear in constructions where grammatical reciprocity is blocked. In this section, I review these properties and show that they consistently appear with the Romance verbs that I characterize as lexical reciprocals. This supports the claim that the ability of a Romance verb to express reciprocity without additional elements reflects the same phenomenon that is cross-linguistically characterized as lexical reciprocity.

4.1 Nominalizations

One property of the Romance predicates that I characterize as lexical reciprocals is the possibility of forming nominals with a reciprocal interpretation. Doron and Rappaport Hovav (2009) noticed that certain French verbs that they consider lexical reciprocals can be nominalized and keep a reciprocal interpretation (see (29) in §2). This observation can be extended to other Romance languages. Consider for example the Italian verb *incontrare* 'meet', characterized as a lexical reciprocal in (43). The nominal derived from this verb has an inherent reciprocal interpretation: its use in (45) refers to a meeting *between* Mary and Lisa.

(45) L' incontro di Mary e Lisa. (It)
the meeting of Mary and Lisa
'The meeting of Mary and Lisa.'

However, verbs often miss nominalized forms. For this reason, nominalizations do not always provide an opportunity to test the verb's reciprocity. As an example, consider the predicate *lasciare* 'leave/break up': it cannot be nominalized, although it can express reciprocity without *se* in causatives, and it has a meaning that is cross-linguistically common among lexical reciprocals. Thus, although I adopt Doron and Rappaport Hovav's proposal that reciprocal nominalization can *only* appear with lexical reciprocal verbs, it should be

stressed that not all lexical reciprocals allow such nominalizations.

4.2 Semantic drift

A rather common phenomenon among verbs that I categorize as lexical reciprocals is that they do not always preserve the meaning of their transitive alternate. For example, the Italian verb *trovare* has a transitive entry with the meaning 'find' (46). As with all transitive predicates, the transitive entry of *trovare* can receive a reciprocal interpretation through the grammatical strategy, as in (47). However, *trovare* also has a logically distinct intransitive meaning: 'have a planned meeting', as in (48).[8]

(46) Mary ha trovato una sorpresa sul tavolo. (It)
Mary have.AUX.3SG find.PTCP a surprise on.the table
'Mary found a surprise on the table.'

(47) Mary e Lisa si trovano sempre subito quando
Mary and Lisa SE find.PRS.3PL always immediately when
giocano a nascondino. (It)
play.PRS.3PL at hide and seek.
'Mary and Lisa always find each other quickly when they play hide and seek'.

(48) Mary e Lisa si trovano spesso per studiare insieme. (It)
Mary and Lisa SE find.PRS.3PL often for study.INF together
'Mary and Lisa meet often to study together.'

Semantic drift has been observed for verbs with an inherent reciprocal meaning across several languages (Kemmer, 1993; Haspelmath, 2007; Siloni, 2012). This phenomenon results in reciprocal verbs not having a correspondent transitive base; accordingly, such verbs cannot be analyzed as the outcome of a productive strategy where a reciprocity operator applies to a transitive entry. Similarly to nominalizations, I take semantic drift to be an indication of a lexical reciprocal entry, even though I do not expect it to be a characteristic of all verbs of this class.

[8] *Se*-clauses with lexical reciprocal verbs are consistently ambiguous between the lexical and the grammatical reciprocal interpretations, primed respectively in (48)-(47) by contextual information. However, we will see that this ambiguity can be systematically resolved: environments without *se* and without other reciprocal elements only have the lexical reading (§4.3), whereas reciprocal pronominals or adverbials only lead to grammatical reciprocity (§5.1).

4.3 Pseudo-reciprocal interpretations

Cross-linguistically, grammatical and lexical reciprocity lead to different interpretations. In events with two participants, grammatical reciprocals describe two different events, where in each event the same binary relation holds between the participants in a different direction. The resulting reciprocity is the accumulation of these different 'unidirectional events'. By contrast, lexical reciprocals describe a single collective event that typically – though not necessarily (Kruitwagen et al., 2022) – involves two 'unidirectional sub-events'.

To illustrate this contrast in English, let us consider the grammatical reciprocity created by *each other* in (49a). This sentence is in line with an interpretation that involves different kissing events, where Mary kissed Lisa and Lisa kissed Mary (e.g. on the forehead). In the context of the verb *kiss*, the two events can be simultaneous and they can result, for instance, in a mutual kiss on the lips. By contrast, the lexical reciprocal form in (49b) does not allow two independent unidirectional kisses on the forehead; it can only describe a single kissing event between the two people (e.g. a romantic kiss on the lips).

(49) a. Mary and Lisa kissed each other.

b. Mary and Lisa kissed.

Grammatical reciprocity is central to studies that explore the core meanings of reciprocal elements like *each other*, and their relation with contextual information and predicate concepts (Dalrymple et al., 1998; Beck, 2001; Sabato and Winter, 2012; Mari, 2013; Poortman et al., 2018). I will not delve here into the possible configurations supported by English *each other*, nor into the contrast between weak and strong reciprocity (Langendoen, 1978; Dalrymple et al., 1998), which go beyond the scope of this work. For the sake of simplicity, I will restrict my attention to reciprocal configurations involving only two entities, where these complications do not arise.

Grammatical reciprocity between two participants (49a) systematically leads to equivalences with a conjunction between two opposite 'unidirectional' statements, as in (50).[9]

(50) x and y kissed each other $\Leftrightarrow$ x kissed y and y kissed x

[9] A possible exceptional case is *The bunk beds are on top of one another* (Dalrymple et al., 1998), but see important empirical caveats in Mari (2013).

By contrast, the interpretation of lexical reciprocal predicates is not exhausted by this equivalence. For instance, the meaning of *x and y divorced/broke up/collided* does not require that x divorced/broke up with/collided with y and that y divorced/broke up with/collided with x. Winter (2018) illustrated that different lexical reciprocals show different entailments between the reciprocal intransitive form and the two unidirectional statements. Some lexical reciprocals are indeed characterized by a mutual entailment between collective form and multiple unidirectional relations (51); this equivalence was defined by Winter as *plain reciprocity*. Winter pointed out that plain reciprocals like 'meet' generally have a symmetric transitive alternate, as illustrated in (52).

(51) x and y met $\Leftrightarrow$ x met y and y met x

(52) x met $y \Leftrightarrow y$ met x

Many lexical reciprocals are not 'plain' in this sense. For instance, the reciprocal entry of the verb *divorce* in (53) does not entail two unidirectional relations: a divorce can be initiated by only one individual.[10] There are also lexical reciprocals for which the reverse entailment does not hold, and multiple unidirectional relations do not entail a collective form: in (54) two unidirectional kisses do not imply the occurrence of a mutual kissing event.[11]

(53) x and y divorced $\not\Rightarrow$ x divorced y and y divorced x

(54) x and y kissed $\not\Leftarrow$ x kissed y and y kissed x

The lack of entailment relations in (53) and (54) is characteristic of lexical reciprocals whose transitive alternate is not symmetric. I use the term *pseudo-reciprocal* to encompass the interpretations that characterize the two kinds of lexical reciprocals: plain reciprocals with their characteristic equivalence (52) and non-plain reciprocals, where this equivalence fails in one of its two directions (53)-(54). Pseudo-reciprocity allows us to semantically distinguish

[10]The lack of symmetry requirements for lexical reciprocal predicates has been substantiated experimentally. Kruitwagen et al. (2022) demonstrated that for many Dutch speakers, lexical reciprocals may relax the requirement that both participants are active, as long as there is an intentional collective involvement of the participants in the action.

[11]Dimitriadis (2008b) referred to lexical reciprocal events as 'irreducibly symmetric'. While I subscribe to the view that lexical reciprocal meanings are not uniformly reducible to the meaning of the corresponding transitive meaning, I do not adopt Dimitriadis's assumption that such events are necessarily symmetric in involving the corresponding relation in both directions.

lexical reciprocity from grammatical reciprocity. Under the pseudo-reciprocal interpretation, equivalences like (51) emerge when the underlying binary predicate is symmetric (52), while with grammatical reciprocals with *each other* such equivalence are quite general, as seen in (50). It should be emphasized that this chapter does not aim to provide a systematic account of the lexical semantic processes that underly pseudo-reciprocity. Rather, the phenomenon of lack of plain reciprocity is used as a semantic diagnostic for lexical reciprocals. For more ideas on the semantic principles that underly lexical reciprocity, see Dimitriadis (2008b); Winter (2018); Kruitwagen et al. (2022), among others.

Romance languages show parallel interpretational differences between grammatical and lexical reciprocals. *Se*-clauses with unambiguously transitive verbs get the same interpretation as English forms with *each other*. For instance, the reciprocal reading of sentence (55) entails that Mary described Lisa and Lisa described Mary (note that transitive 'describe' definitely denotes a non-symmetric relation).

(55) Mary e Lisa se descreveram. (BP)
Mary and Lisa SE describe.PST.3PL
i. 'Mary and Lisa described themselves.'
ii. 'Mary and Lisa described each other.'

Romance lexical reciprocals are in line with pseudo-reciprocal interpretations. In constructions without *se* (and without other overt reciprocal markers), these verbs necessarily receive pseudo-reciprocal readings. By contrast, *se*-clauses containing lexical reciprocals additionally show the same range of reciprocal interpretations as the corresponding English clauses with *each other*. This contrast is noticeable with lexical reciprocals like 'kiss', that show a non-plain interpretation.[12] For instance, the BP example in (56a) and the Spanish example in (57a) have an interpretation typical of grammatical reciprocity, in line with the equivalence in (50). Both sentences are true if there were at least two unidirectional relations between the participants, e.g. in a scenario where Mary and Lisa each kissed the other on the forehead in different moments. By contrast, their counterparts without *se* in (56b) and (57b) cannot get an interpretation where each girl was kissed by the other in a different moment: they necessarily

[12]With verbs that describe a symmetric relation in their transitive entry, the distinction between pseudo-reciprocity and the interpretation of grammatical reciprocity is not easy to observe. There is hardly any semantic difference between forms such as *Mary and Lisa meet* and *Mary and Lisa meet each other*.

denote a mutual kiss, in line with the interpretation sketched in (54). Note that a scenario with a single, mutual kissing event is also supported by (56a) and (57a): the pseudo-reciprocal reading of the lexical reciprocal predicate remains accessible in the presence of *se*.[13]

(56) a. Mary e Lisa se beijaram. (BP)
Mary and Lisa SE kiss.PST.3PL
i. 'Mary and Lisa kissed.'
ii. 'Mary and Lisa kissed each other.'
iii. 'Mary and Lisa kissed themselves.'

b. Mary e Lisa beijaram.
Mary and Lisa kiss.PRS.3PL
'Mary and Lisa kissed.'

(57) a. Hice besarse a Mary y Lisa. (Sp)
make.PST.1SG kiss.INF-SE DOM Mary and Lisa
i. 'I caused Mary and Lisa to kiss.'
ii. 'I caused Mary and Lisa to kiss each other.'
iii. 'I caused Mary and Lisa to kiss themselves.'

b. Hice besar a Mary y Lisa.
make.PST.1SG kiss.INF DOM Mary and Lisa
i. 'I caused Mary and Lisa to be kissed.'
ii. 'I caused Mary and Lisa to kiss.'

Furthermore, in (56a) and (57a) the presence of *se* correlates with the availability of a reflexive interpretation. The grammatical reflexive reading is generally dispreferred with verbs that have a lexical reciprocal entry, but it is not logically excluded. A scenario where Mary and Lisa each kissed herself could be possibly supported in (56a) and (57a), but it is utterly inaccessible in the absence of *se* (56b)-(57b).

The evidence reviewed in this section illustrates that the only reciprocal interpretation licensed in Romance constructions without *se* (and without another reciprocal marker) is the pseudo-reciprocal reading that is associated with lexical reciprocals in other languages. In contrast, *se*-clauses featuring

[13]In the case of the verb 'kiss', the pseudo-reciprocal reading may entail a plain reciprocal reading: if two individuals are involved in a mutual kiss, it follows that each might have been kissing the other. However, this is a property of the predicate 'kiss', and not an entailment relation that holds systematically between the relations denoted by lexical and grammatical reciprocal entries. Notably, with a verb like 'leave/break up', a collective form does not entail two unidirectional relations.

lexical reciprocal predicates are ambiguous between three readings: (i) a lexical (pseudo-)reciprocal reading, (ii) a grammatical (plain) reciprocal reading, and (iii) a grammatical reflexive reading.

4.4 Reciprocal 'with'-construction

Another property that characterizes Romance lexical reciprocals is the possibility of appearing in the reciprocal 'with'-construction. In this construction, the argument of a reciprocal predicate is split into two parts: one part is encoded as syntactic subject, while the other is introduced by a comitative preposition. It has been noted since Kemmer (1993) that in languages with an overt distinction between lexical and grammatical reciprocity, the 'with'-construction is restricted to lexical reciprocals.[14] In the Greek examples below, the 'with'-construction is allowed with the lexical reciprocal 'kiss' in (58a), but it is ungrammatical with the productive quantificational strategy in (58b).

(58) a. O Yanis filithike me ti Maria. (Greek)
the John kiss.NACT.PST.3SG with the Maria
'John and Maria kissed.'

b. * O Yanis filise o enas ton alo me ti Maria.
the John kiss.PST.3SG the one the other with the Maria
(Dimitriadis, 2004, pp.1,2)

Dealing with Romance languages, Siloni (2012) discussed the reciprocal 'with'-construction in French and Romanian, and proposed that it is restricted

[14]This generalization holds for languages such as Greek, English, Dutch and Hebrew, where lexical reciprocity is expressed by a (possibly empty) verbal morpheme, and grammatical reciprocity is expressed by a quantificational strategy. However, the pattern does not ubiquitously extend to languages that convey reciprocity through verbal morphology. In Swahili (ia) and Malagasy (ib), for example, the reciprocal 'with'-construction is available with any transitive verb bearing the reciprocal morpheme. The availability of this construction across different languages will be discussed in more detail in Chapter 5.

(i) a. Juma a-na-pend-an-a na Halima. (Swahili)
Juma SM.3SG-PRS-love-RECP-FV with Halima
'Juma and Halima love each other.'
(Vitale, 1981, p.147)

b. Ny olona iray izay m-if-an-enjika amin-dRabe. (Malagasy)
the person one who PRS-RECP-ACT-chase with-Rabe
'The one person who is engaged in mutual chasing with Rabe.'
(Keenan and Razafimamonjy, 2004, p.184)

to reciprocal verbs formed in the lexicon. For Italian, felicitous instances of the 'with'-construction have been noted by Mocciaro (2011), who suggested that they only occur with symmetric verbs like 'meet'. However, the reciprocal 'with'-construction is also possible with non-symmetric predicates that belong in the class of lexical reciprocals (59). This construction is not unanimously accepted with certain lexical reciprocals, such as *baciare* 'kiss' or *abbracciare* 'hug', and some authors have considered it ungrammatical with these verbs (Dimitriadis, 2004; Mocciaro, 2011). However, cases where these verbs appear in the 'with'-construction are accepted in spoken language, and despite their marginality in formal registers, attested examples can be readily found (60). By contrast, the reciprocal 'with'-construction is never felicitous with unambiguously transitive predicates (61).

(59) a. Mary si è consultata con Lisa. (It)
Mary SE be.AUX.3SG consult.PTCP with Lisa
'Mary conferred with Lisa.'

b. Mary si è lasciata con Lisa.
Mary SE be.AUX.3SG leave.PTCP with Lisa
'Mary broke up with Lisa.'

(60) a. L' ha sorpresa mentre si baciava con
3SG have.AUX.3SG surprise.PTCP while SE kiss.PST.3SG with
Milhouse. (It)
Milhouse
'He caught her while she was kissing with Milhouse.'[15]

b. Si è abbracciato con il presidente [...].
SE be.AUX.3SG hug.PTCP with the president
'He hugged with the president.'[16]

(61) * Maria si è ringraziata con Lisa. (It)
Mary SE be.AUX.3SG thank.PTCP with Lisa.

Below, I provide more attested examples of the reciprocal 'with'-construction with lexical reciprocals from Spanish (62), Catalan (63) and BP (64). In these languages too, the 'with'-construction is allowed with the verbs that I treat as lexical reciprocals, in line with the property of this class of verbs in other

[15]Retrieved on 24 Aug 2022 from the Italian Web 2020 (itTenTen20) corpus.
[16]Retrieved on 25 Jan 2024 from `https://www.ilpost.it/2017/05/29/serie-a-cose-di-cui-parlare-38/`

languages. As shown by (64), in BP the omission of *se* is optional in this construction.[17]

(62) Hermione se había besado con Viktor Krum. (Sp)
Hermione SE AUX.3SG kiss.PTCP with Viktor Krum
'Hermione kissed with Viktor Krum.'[18]

(63) És l' imam d' El Caire el que es petoneja amb el be.PRS.3SG the imam of Cairo the that SE kiss.PRS.3SG with the Papa. (Ca)
pope
'It is the Imam of Cairo who is kissing with the Pope.'[19]

(64) a. Ele se casou com uma minha amiga. (BP)
He SE marry.PST.3SG with a mi friend
'He got married with a friend of mine.'[20]

b. A moça casou com o príncipe.
The girl marry.PST.3SG with the prince.
'The girl got married with the prince.'[21]

The vast majority of the examined predicates that can express reciprocity without *se* allow the reciprocal 'with'-construction. It is hardly surprising that

[17]In Table 2.2, where I summarized the constructions where the omission of *se* is allowed with lexical reciprocals, the classification 'finite clauses' encompasses the reciprocal 'with'-construction. This nuance is relevant for a few idiosyncratic cases. With the BP verb *consultar* 'consult', the omission of *se* in finite clauses with a plural subject seems hard for native speakers (ia), yet this verb allows the 'with'-construction (ib) without *se*, and has other characteristics of lexical reciprocals (see Appendix A). Accordingly, *consultar* supports the characterization of Romance lexical reciprocals as the verbs that can express reciprocity without *se* in the constructions in Table 2.2.

(i) a. As meninas *(se) consultaram. (BP)
the girls SE consult.PST.3PL
'The girls consulted each other/ conferred.'

b. Irene (se) consultou com Paulo.
Irene SE consult.PST.3SG with Paulo
'Irene conferred with Paulo.'

[18]Retrieved on 24 Aug 2022 from the Spanish Web 2018 (esTenTen18) corpus.

[19]Retrieved on 24 Aug 2022 from the Catalan Web 2014 (caTenTen14) corpus. The example is extracted from a text that refers to a controversial advertisement depicting a mutual kiss on the lips.

[20]Retrieved on 25 Jan 2024 from the Brazilian Portuguese corpus (Corpus Brasileiro) on `Sketchengine.eu`.

[21]Retrieved on 25 Jan 2024 from the Brazilian Portuguese corpus (Corpus Brasileiro) on `Sketchengine.eu`.

not all of them are unanimously accepted: this kind of idiosyncrasy is also found in languages with an overt lexical/grammatical reciprocity distinction. In English, for instance, *hug* does not take a reciprocal 'with' (65a), whereas *fight* does (65b), although both verbs have intransitive (non-symmetric) reciprocal entries.

(65) a. * Mary hugged with Lisa.
b. Mary fought with Lisa.

4.5 Singular group NPs

Another characteristic of Romance lexical reciprocals is the possibility of expressing reciprocity with morphosyntactically singular group NPs. These are NPs headed by singular nouns like *committee*, *team* and *choir* that refer to collections, usually of animate entities. Barker (1992) defined group nouns in English as those nouns that can take a plural but not a singular *of*-complement, as in (66).

(66) A team of women/*woman.

As noted by Authier and Reed (2018b) for French and English, group NPs support some kinds of reciprocal interpretations. In English, morphosyntactically singular group nouns can act as the subject of lexical reciprocal verbs, allowing an interpretation where the members of the group are mutually involved in the action described by the verb (67a). By contrast, as observed in Barker (1992), singular English group NPs cannot serve as antecedents for *each other*, as *each other* is generally incompatible with singular predication (67b).[22]

[22]In British English, which often allows plural agreement for singular group NPs, grammatical reciprocity is acceptable, as in (ia). However, as in other varieties of English, this is not possible with singular agreement, as in (ib), (de Vries, 2015).

(i) a. The team have met each other.
b. * The team has met each other.

In Hungarian, by contrast, Rákosi (2020) observed that reciprocal anaphors are licensed by singular verbs, as in (ii).

(ii) A Facebookon szidta egymas-t a csalad. (Hungarian)
the Facebook.on cursed.3SG each.other-ACC the family
'The family were cursing each other on Facebook.'
(Rákosi, 2020, p.77)

(67) a. The team has hugged/met.
b. * The team has thanked each other.

In Romance languages, unambiguously transitive verbs with *se* do not get a reciprocal interpretation with singular group NPs. The BP example in (68) only has a reflexive interpretation, for instance where some representative member(s) of the team described the team as a whole.

(68) O time se descreveu. (BP)
the team SE describe.PST.3SG
'The team described itself.'

By contrast, the verbs that I characterize as lexical reciprocals can express reciprocity with group NPs and singular agreement. This is shown in the BP example in (69), which is felicitous under the collective reading where the members of the team were involved in a hug. The same holds for Italian (70), Spanish (71) and Catalan (72).

(69) O time (se) abraçou. (BP)
the team SE hug.PST.3SG
'The team hugged.'

(70) La famiglia si abbraccia. (It)
the family SE hug.PRS.3SG
'The family hugs.'[23]

(71) El equipo se abraza en círculo. (Sp)
the team SE hug.PRS.3SG in circle
'The team hugs in a circle.'[24]

(72) L' equip s' abraça. (Ca)
the team SE hug.PRS.3SG
'The team hugs.'[25]

4.6 Summary

This section explored a class of Romance predicates that express reciprocity by themselves, with or without *se*. In a set of language-specific constructions

[23]Retrieved on 24 Aug 2022 from the Italian Web 2020 (itTenTen20) corpus.
[24]Retrieved on 25 Jan 2024 from the Spanish Web 2018 (esTenTen18) corpus.
[25]Retrieved on 25 Jan 2024 from `https://www.timeout.cat/barcelona/ca/blog/080-barcelona-fashion-txell-miras-des-del-backstage`

where *se* may or must be omitted, these verbs express reciprocity without any additional reciprocal element, and without the reflexive/reciprocal polysemy that characterizes *se*-constructions. I propose that this property is indicative of a class of lexical reciprocal verbs, which other languages exhibit with similar verbal concepts.

In addition to the omission of *se*, I demonstrated that Romance lexical reciprocals show other properties that are characteristic of lexical reciprocals in other languages. With or without *se*, these verbs consistently support a pseudo-reciprocal interpretation, reciprocal 'with'-constructions, and reciprocal readings with singular group subjects. A comprehensive overview of lexical reciprocals in the four Romance languages is provided in Appendix A, along with examples from their identifying properties.

The data in this section support the following generalizations on *se* and reciprocity:

(73) **SE generalizations – lexical reciprocity**:

a. *Se*-clauses without an additional reflexive/reciprocal item can have access to a grammatical reflexive or grammatical reciprocal interpretation.

b. Certain verbs (with a transitive entry) can appear without *se* or other reflexive/reciprocal items. If such a sentence without *se* is unambiguously pseudo-reciprocal, the verb has a *lexical reciprocal* entry.

c. The pseudo-reciprocal reading of these verbs is retained with an overt *se*. Thus, *se*-clauses with lexical reciprocals are ambiguous between pseudo-reciprocity (due to lexical reciprocity) and plain reciprocity (due to grammatical reciprocity), on top of their standard reciprocal/reflexive ambiguity.

Throughout the chapter, we examined these generalizations with respect to reciprocity, but it is worth highlighting that they also extend to reflexivity. There are Romance predicates with meanings in the conceptual domain of 'naturally reflexive' events (Kemmer, 1993), like 'shave', 'wash' or 'get dressed' that manifest their inherent reflexive reading without *se*, across the same constructions as lexical reciprocals. We will explore these verbs in more detail in Chapter 3.

5 Grammatical reciprocity and reflexivity without *se*

So far, we have established that reciprocity can be lexically expressed in Romance languages, which is easily noticeable in environments where *se* is omitted. In this section, we will see that also grammatical arity-reducing operations can take place without *se*.

This phenomenon uniformly occurs with all transitive verbs in syntactic environments that allow the omission of *se*, provided that an overt reflexive/reciprocal element appears. As I will show, Romance reflexive/reciprocal pronominals and adverbials (like BP *si mesmo* 'himself' or Spanish *mutuamente* 'mutually') disambiguate the interpretation of *se*-clauses, ridding them of the reflexivity/reciprocity polysemy. In combination with lexical reciprocals (or reflexives), such elements also remove the pseudo-reciprocal (reflexive) reading associated to the lexical intransitive entry, only allowing an interpretation associated to grammatical reciprocity (reflexivity).

The facts presented in this section, together with the generalization on lexical reciprocals in (73), will lead to the theoretical picture proposed in §6: the reflexive and reciprocal elements discussed in this section are treated as semantic operators similar to parallel items in other languages, whereas the clitic *se* is a marker that does not carry an independent meaning of its own.

5.1 Overt reciprocal elements

Overt reciprocal elements include adverbials like Italian *a vicenda* 'mutually, in turns' and Spanish *mutuamente* 'mutually', as well as pronominal elements like BP *um o outro* 'one another' and Catalan *l'un a l'altre* 'one another'. These elements have three different effects that are relevant for the present study.

First, when they appear with *se*, they remove the reflexivity/reciprocity polysemy, and they unambiguously lead to a reciprocal reading. For example, the Italian clause in (74) can receive either a reflexive or a reciprocal interpretation, whereas only the latter is accessible in the presence of *a vicenda* in (75).

(74) Mary e Lisa si sono descritte. (It)
Mary and Lisa SE be.AUX.3PL describe.PTCP
i. 'Mary and Lisa described themselves.'
ii. 'Mary and Lisa described each other.'

(75) Mary e Lisa si sono descritte a vicenda. (It)
Mary and Lisa SE be.AUX.3PL describe.PTCP mutually
'Mary and Lisa described each other.'

Second, overt reciprocal elements can lead to grammatical reciprocity without *se*. This occurs in precisely the same constructions where *se* can be omitted with lexical reciprocals and reflexives. As illustrated by sentence (76) below, *a vicenda* supports grammatical reciprocity without *se* in Italian analytic causatives:

(76) Bisogna dividere i ragazzi [..] per non farli sbranare
must.PRS divide.INF the boys for not make.them maul.INF
a vicenda. (It)
mutually
'It is necessary to separate the boys, to prevent them from mauling each other.'[26]

Similarly, BP transitive verbs can lead to reciprocity without *se* in finite clauses where the adverbial *um o outro* occurs.[27] For example, let us consider sentence (77):

(77) Mary e Lisa (se) descreveram uma a outra. (BP)
Mary and Lisa SE describe.PRS.3PL one the other
'Mary and Lisa described each other.'

Sentence (77) unambiguously has the grammatical reciprocal interpretation where Mary described Lisa and Lisa described Mary. Due to the presence of the reciprocal item *um o outro*, and in contrast with sentence (33) above, the clitic *se* in (77) is only optional. The same observation extends to Spanish absolute constructions, where *mutuamente* 'mutually' can lead to a reciprocal interpretation without *se* with any transitive verb. For example:

(78) Necesitados mutuamente, los gobernadores y el presidente
Need.PTCP mutually the governors and the president
llevaban a cabo continuos acuerdos. (Sp)
take.PST.3PL at end continuous agreements

[26]Retrieved on 24 Aug 2022 from the Italian Web 2020 (itTenTen20) corpus.

[27]As for the omission of *se* with lexical reciprocals (§3.1), I expect possible variation among BP speakers on the acceptability of grammatical reciprocity without *se*. However, I generalize that if a speaker accepts the omission of *se* with *um o outro* and verbs that are cross-linguistically transitive-only (e.g., 'describe' or 'thank'), then the speaker accepts the omission of *se* with *um o outro* for all transitives.

'Needing each other, the governors and the president carried out continuous agreements.'[28]

Third, overt reciprocal elements also remove the pseudo-reciprocal reading that appears with *se* and lexical reciprocals. This only leaves the plain reciprocal reading associated to the grammatical strategy. Let us first consider the following example, without any overt reciprocal element:

(79) Mary e Lisa si sono lasciate. (It)
Mary and Lisa SE be.AUX.3PL leave.PTCP
i. 'Mary and Lisa left themselves.'
ii. 'Mary and Lisa left each other.'
iii. 'Mary and Lisa broke up.'

In sentence (79), on top of a less accessible grammatically reflexive reading (79i), the predicate *lasciare* 'leave/break up' leads to two prominent interpretations: one using a reciprocated transitive entry 'leave' (79ii), and another using the lexical pseudo-reciprocal meaning 'break up' of the verb *lasciare* (79iii). The latter reading does not entail two unidirectional relations, as the relationship could be unilaterally terminated by one individual. Thus, sentence (79) is considered true in a scenario where Mary terminated the relationship with Lisa, while Lisa is left heart-broken. When we add the element *a vicenda*, such pseudo-reciprocal readings disappear. Consider for instance what happens when *a vicenda* is added to sentence (79):

(80) Mary e Lisa si sono lasciate a vicenda. (It)
Mary and Lisa SE are.AUX.3PL leave.PTCP mutually
'Mary and Lisa left each other.'

Unlike (79), sentence (80) cannot be accepted if the relationship between Mary and Lisa was unilaterally terminated: for the sentence to be true, each of the two people must have left the other. Thus, in (80) the adverbial *a vicenda* disambiguates (79) and only allows the grammatical (plain) reciprocal reading.

5.2 Overt reflexive elements

Similar observations to those made above with respect to reciprocal elements also hold for reflexive elements like the pronominals BP *si mesmo* 'himself' in

[28]Retrieved on 24 Aug 2022 from the Spanish Web 2018 (esTenTen18) corpus.

BP, *si mismo* 'himself' in Spanish, and *si mateix* in Catalan.[29]

First, these items disambiguate *se*-clauses by eliminating the reciprocal reading. For instance, while the BP sentence (81) shows the familiar reflexivity/reciprocity ambiguity, (82) can only be interpreted reflexively.

(81) Mary e Lisa se descreveram. (BP)
Mary and Lisa SE describe.PST.3PL
i. 'Mary and Lisa described themselves.'
ii. 'Mary and Lisa described each other.'

(82) Mary e Lisa (se) descreveram a si mesmas. (BP)
Mary and Lisa SE describe.PST.3PL themselves
'Mary and Lisa described themselves.'

Second, like overt reciprocal elements, overt reflexives allow grammatical reflexive interpretations without *se* in the same environments that allow lexical reciprocity without *se*. To consider one example, in BP finite clauses like (83) below, *se* is optional when the reflexive element *si mesmo* is present:

(83) Paulo (se) descreveu a si mesmo. (BP)
Paulo SE describe.PST.3SG himself
'Paulo described himself.'

Third, overt reflexive elements are only in line with the interpretation associated to grammatical reflexivity. The semantic difference between lexical and grammatical reflexives has not been addressed in this chapter, and it will be discussed thoroughly in Chapter 3. For now, it suffices to mention that the BP *se*-clause with the verb *vestir* 'dress, get dressed', in (84) has access to two kinds of interpretations. The interpretation in (84i) is typical of grammatical reflexivity in English, and it requires Mary to be agent and patient of the event. The interpretation in (84ii) is associated with lexical reflexivity in other languages, and it may hold true in a situation where Mary was dressed by someone other than herself. However, the sentence with *a si mesma* in (85) does not support this latter scenario, and is only truthful in the interpretation

[29]The observations presented in this section do not apply to the Italian element *se stesso* 'himself', which is incompatible with *se* (i):

(i) Paolo (*si) descrive se stesso. (It)
Paolo SE describe.PRS.3SG himself
'Paolo describes himself.'

associated to grammatical reflexivity, where Mary must be the entity dressing Mary.

(84) Mary se vestiu. (BP)
Mary SE dress.PST.3SG
i. 'Mary dressed herself.'
ii. 'Mary got dressed.'

(85) Mary (se) vestiu a si mesma. (BP)
Mary SE dress.PST.3SG herself
'Mary dressed herself.'

The data reviewed in this section can be summarized with the following generalizations about *se* and overt reciprocal and reflexive items, which complement the generalizations in (73):

(86) **SE generalizations – overt reciprocity and reflexivity**:

a. Clauses (with or without *se*) containing an overt reciprocal (reflexive) item are unambiguously reciprocal (reflexive).

b. When a lexical reciprocal or reflexive predicate appears with a reciprocal (reflexive) item, it only shows grammatical reciprocity (reflexivity, respectively).

c. The same environments that support lexical reciprocity and reflexivity without *se* also support grammatical reciprocity (reflexivity) without *se*, provided that they contain an overt reciprocal (reflexive) item.

6 *Se* as a functional head projection

This section proposes a unified analysis of generalizations (73) and (86), focusing on the syntactic-semantic role of *se* with lexical and grammatical reciprocity/reflexivity. I follow Labelle (2008) in assuming that *se* is a Voice head projection. However, I diverge from Labelle's proposal that *se* has a direct contribution to reflexive or reciprocal meanings as an operator that binds external and internal arguments. Instead, I propose that *se* is a marker *à la* Reinhart and Reuland (1993), which marks the VP as reflexive/reciprocal, without providing the reflexive/reciprocal meaning itself. I argue that arity-reducing operators

may be overt (like the reflexive and reciprocal items discussed in §5) or they can operate covertly, licensed by *se*.

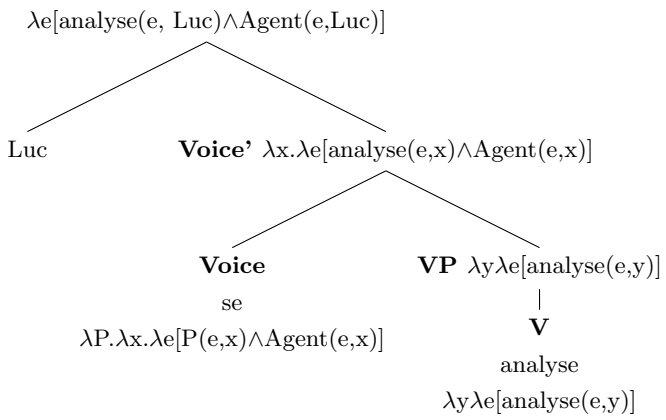
Labelle (2008) proposed that French *se* is responsible for reflexive/reciprocal interpretations when it combines with transitive predicates, but it is semantically redundant with predicates that already have a reflexive/reciprocal reading. To illustrate Labelle's account, let us consider the following French examples:

(87) Luc s' analyse. (French)
Luc SE analyze.PRS.3SG
'Luc analyzes himself.'

(88) Luc s' autoanalyse. (French)
Luc SE self.analyze.PRS.3SG
'Luc analyzes himself.'
(Labelle, 2008, p.841)

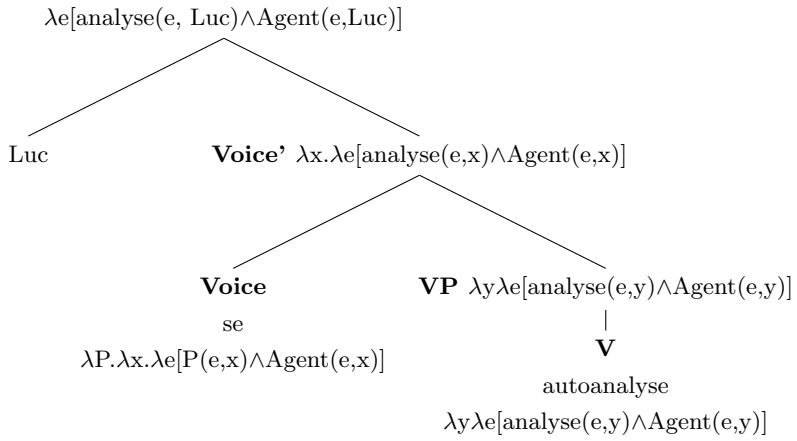
Labelle's main point about these examples has been discussed earlier in §2: French *se* leads to reflexivity (or reciprocity) with ordinary transitive verbs (87), but it also appears with verbs whose reflexive (or reciprocal) meaning already comes from an additional element, e.g. *auto-* in (88). Labelle's syntactic-semantic analysis of examples like (87) and (88) is given in (89) and (90) below:[30]

(89) Following Labelle (2008, p.844):



[30]The examples in (87) and (89) are not mentioned in Labelle (2008), and they are provided here based on Labelle's analysis of ordinary transitive verbs. The contrasts Labelle provided between examples with *auto-* affixation and transitive verbs are not as minimal as the contrast between the predicates in (87)-(88), though this does not affect their main argument.

(90) Labelle (2008, p.844):



Labelle's analysis relies on Kratzer's (1996) neo-Davidsonian semantics. In Labelle's extension of Kratzer's proposal, *se* is a functional head that introduces the external argument (x in the component Agent(e,x)) and binds it to the internal argument of the verb (x in P(e,x)). With transitive verbs as in (89), *se* introduces the event's agent as an external argument, binding it to the internal argument. By contrast, verbs that are prefixed by *auto-* or *entre-*, like *autoanalyser* in (90), already contain an external argument variable in their denotation. In such cases, *se* is semantically redundant, but it is nonetheless obligatory for the grammaticality of French sentences like (88). Labelle explained this requirement by assuming that *se* is needed to ensure a coherent interpretation: the idea is that in the absence of *se*, Active Voice would occupy the Voice head and it would introduce an external argument which would not be bound to the internal argument of the VP. Labelle's assumption (which is questioned below) is that this would lead to an incoherent interpretation where there are two distinct unsaturated external positions for one and the same subject, a situation that would violate the Theta-criterion.

Labelle's analysis is the starting point for the treatment of *se* proposed in this section. However, it presents some incompatibilities with the observations of this chapter, and it raises some questions in this respect. One problem is a problem of generality. Labelle's analysis relies on the assumption that whenever *se* appears, the verb has an internal argument. Labelle's semantic

analysis works for verbs like *autoanalyser*, which are the outcome of a productive prefixation process. In Labelle's account, a verb like *autoanalyser* in French is synonymous with the expression *analyze oneself* in English, because the prefixes *auto-* and *entre-* have the same binding role attributed to English reflexive and reciprocal pronouns. However, the analysis should be extended to capture the semantics of the lexical reciprocals that was covered in §4.3. As we saw, the inherent reading of many lexical reciprocals is not in line with multiple thematic roles. Thus, the pseudo-reciprocal interpretation of lexical reciprocals like 'hug' cannot be derived by a standard binding mechanism like the one Labelle proposed for *auto-* and *entre-* prefixation. Another problem of generality appears with the assumption that *se* is uniformly needed for co-indexation between the internal argument and the external argument of VPs with transitive verbs. As we saw in §5, there are cases of Romance transitive verbs where *se* does not appear, and a reciprocal or reflexive interpretation emerges due to the presence of another reciprocal/reflexive element (such as *si mesmo* or *um a outro* in BP). Such cases are not addressed in Labelle's account, where the presence of *se* is considered as a ubiquitous requirement to ensure reflexive/reciprocal interpretations. Another problem lies in the semantic motivations for the presence of *se*. As mentioned previously, Labelle proposed that without *se*, Active Voice would introduce a distinct Agent variable for verbs like *autoanalyser*, resulting in two distinct Agents (one introduced by *auto-*, one introduced by Active Voice). The underlying idea is that in this case, counter-indexing would be assumed (Labelle, 2008, p.845): *se* is therefore considered necessary to guarantee the co-indexation of the Agent variable with the internal argument. However, the identification of the two agent arguments is already assumed in Labelle's analysis (e.g. in cases like (90) above), so the reason behind this stipulation remains unclear.

To overcome these problems, I propose an alternative explanation for the required presence of *se*, where it is not directly responsible for reflexive and reciprocal interpretations. I follow the proposal that *se* is a Voice head projection, but I argue that it never contributes to reflexive or reciprocal meanings all by itself. Instead, I propose that *se* combines with VPs that already have a reflexive/reciprocal interpretation: either a 'lexical' interpretation due to the intrinsic meaning of the verb stem, or a 'grammatical' interpretation derived by a reflexive/reciprocal operator. I propose that such operators can be introduced overtly (e.g. as pronouns or adverbials) or covertly, as operators that are responsible for

the semantics of arity reduction. A crucial difference between overt and covert operators is that only the former can perform the necessary 'marking' of a VP headed by a transitive verb as being reflexive/reciprocal, whereas covert operators do not. I propose that in such cases, where R(eflexive/reciprocal)-marking is missing, the introduction of *se* is necessary to make the reflexive/reciprocal semantics correspond with morphosyntax. I propose that the variability in the presence of *se* across different Romance languages emerges due to different syntactic restrictions on the presence of this element.

In more detail, I analyze the appearance of *se* as relying on four different factors:

(i) **Types**: I follow the typed meaning for Active Voice as stated in (91) below: an operator that takes predicates over events (type st) and adds to them an unsaturated external argument, which leads to a predicate of type $e(st)$. This meaning relies on the definition of Active Voice provided by Kratzer (1996) and Labelle (2008), in which I incorporate event identification, which is a separate operation in Kratzer and Labelle. Based on the proposed meaning in (91), Active Voice is ruled out with reflexive/reciprocal VPs due to a type mismatch. I assume that lexical reflexive/reciprocal intransitive predicates contain an external argument variable as part of their lexical meaning, whereas grammatical reflexive/reciprocal predicates contain an external argument variable because it is introduced by an operator. Thus, (lexical and grammatical) reflexive and reciprocal verbs are assigned the lexical type *e(st)*. This is in contrast to other intransitive verbs that are assumed to be of the neo-Davidsonian type *st*. This contrast is illustrated in (92) below. The intransitive reciprocal entry of verbs like 'hug' is analyzed as a predicate 'hug_1' that has an external argument with the thematic role 'AgPt'.[31] This thematic role shows both agent-like and patient-like semantic properties of the corresponding transitive entry, which is denoted 'hug_2'.[32] Further, overt reciprocal and reflexive items like *si mesmo* (BP,

[31] Although I adopt the idea that lexical reciprocals have one argument with a complex thematic role, along the lines of Reinhart and Siloni (2005)'s combined thematic role, I do not assume that the semantics of this role can be fully deduced from the transitive entry. In fact, in many of the cases discussed in §4.3, we see that the intransitive version cannot logically be expressed by the binary predicate denoted by the transitive entry. I set aside questions on whether the bundling operation of Reinhart and Siloni (2005) can or should be given a formal semantics that accounts for these facts.

[32] A similar treatment is reserved to predicates with a lexical reflexive entry, as it will be

'herself') or *um o outro* (BP, 'each other') introduce an external argument and identify it with the internal argument of the transitive verb (93).[33] For *se* I propose the typed function in (94): the (semantically void) identity function on two-place predicates over entities and events.

(91) Active Voice: $\lambda P_{st}.\lambda y_e.\lambda e_s.[P(e) \wedge \text{Agent}(e, y)]$

(92) 'laugh': $\lambda e.\text{laugh}(e)$

'hug' (intransitive): $\lambda y.\lambda e.\text{hug}_1(e) \wedge \text{AgPt}(e, y)$
(where y is a sum of entities)

'hug' (transitive): $\lambda y.\lambda e.\text{hug}_2(e, y)$

(93) 'herself': $\lambda P_{e(st)}.\lambda y_e.\lambda e_s.[P(e, y) \wedge \text{Agent}(e, y)]$

'each other': $\lambda P_{e(st)}.\lambda y_e.\lambda e_s.\forall x_1, x_2 \in y\,[x_1 \neq x_2 \rightarrow$
$[\ \exists e' \leq e.\text{Agent}(e', x_1) \wedge \text{P}(e', x_2) \wedge$
$\exists e'' \leq e.\text{Agent}(e'', x_2) \wedge \text{P}(e'', x_1)\ ]]$
(y is a sum of entities; e is an event reducible to unidirectional events)

(94) *se*: $\lambda P_{e(st)}.P$

As a result of these types and meanings, both lexical and grammatical reciprocals (type $e(st)$) can combine with *se* (type $e(st)e(st)$), but not with Active Voice (type $st(e(st))$). Conversely, non-reflexive and non-reciprocal intransitive verbs like 'laugh' (type st) can combine with Active Voice (which introduces their external argument), but not with *se*.

(ii) **Covert operators**: I assume that reflexive and reciprocal operators can be covert (95). They have the same meanings of 'herself' and 'each other' in (93).

(95) RFL: $\lambda P_{e(st)}.\lambda y_e.\lambda e_s.[P(e, y) \wedge \text{Agent}(e, y)]$

RCP: $\lambda P_{e(st)}.\lambda y_e.\lambda e_s.\forall x_1, x_2 \in y\,[x_1 \neq x_2 \rightarrow$
$[\ \exists e' \leq e.\text{Agent}(e', x_1) \wedge \text{P}(e', x_2) \wedge$
$\exists e'' \leq e.\text{Agent}(e'', x_2) \wedge \text{P}(e'', x_1)\ ]]$
(y is a sum of entities; e is an event reducible to unidirectional events)

discussed in Chapter 3 (§6).

[33] As motivated earlier in §4.3, I restrict my attention to situations where the subject is composed of only two individuals.

(iii) **Syntactic marking**: I argue that a crucial difference between overt and covert reflexive/reciprocal operators is that the latter cannot syntactically 'mark' predicates as reflexive/reciprocal. Syntactic marking is intended here in the sense of Reinhart and Reuland's (1993) analysis of Conditions A and B. I implement Reinhart and Reuland's proposal as follows:

(96) **Condition A**: An R-marked predicate has a reflexive/ reciprocal interpretation. [34]

Condition B: Any reflexive/reciprocal interpretation of a predicate requires R-marking.

Specifically, Condition A requires that any verb appearing with *se* or with an overt reflexive/reciprocal item has a reflexive/reciprocal interpretation; we have seen that this requirement systematically holds in Romance languages. Condition B requires that any verb that is interpreted reflexively/reciprocally must be R-marked. I assume that there are three possible sources of R-marking: (i) overt reflexive/reciprocal elements (like *um o outro* in BP); (ii) reflexive/reciprocal intransitives in the lexicon (like 'hug'); (iii) the element *se*. Thus, lexical reciprocal (and reflexive) verbs satisfy Condition B even when they are not accompanied by any overt R-marker (such as *se* or overt reflexive/reciprocal elements). In the absence of a lexical reflexive/reciprocal entry, reflexive and reciprocal interpretations cannot emerge from the verb alone. Thus, for Condition B to be satisfied, transitive predicates must be marked by an overt reflexive pronominal and/or by *se*.

(iv) **Syntactic construction**: There are syntactic environments where *se* may or must be omitted. I take this as a distributional fact about *se*, and I consider here three types of syntactic environments in relation to the presence or absence of *se* with reflexive/reciprocal interpretations:

[34] As mentioned in §2, *se* can also be associated with middle interpretations that are not reflexive or reciprocal. I do not consider such cases as R-marked. While the current analysis of *se* has the potential of being extended to other cases where no Agent variable is introduced (such as anticausatives), this goes beyond the scope of the current chapter. For now, I follow Labelle (2008) in treating the reflexive/reciprocal *se* separately from the middle/anticausative *se*.

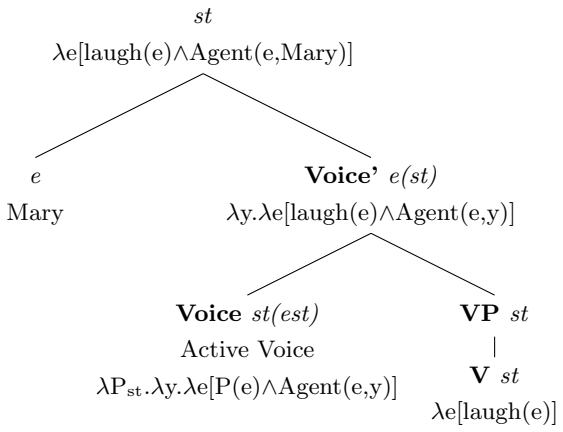
+SE, where *se* is obligatory (It/Sp/Cat finite clauses)
–SE, where *se* is disallowed (It causatives, Sp/Ca absolutes)
±SE, where *se* is optional (BP finite clauses, Sp/Ca causatives).
I hypothesize that the possible omission of *se* correlates to the presence/absence of a Voice projection to host this element. For causatives, this is in line with existing proposals that Romance causative complements often lack an external argument (Labelle, 2017). For BP finite clauses, a connection between *se*-omission and absence of a Voice head is proposed in Carvalho (2018), although an extension of this proposal to reflexive/reciprocal interpretations is not straightforward. The hypothesis that availability of Voice is the key for this variation raises questions with respect to the syntax underlying constructions with or without *se*, and with respect to the cross-linguistic variation within Romance. I defer these questions to future work. This hypothesis is convenient for the present goals, but it requires further study and is not part of the core proposal. For the present purposes, it is sufficient to observe that the requirements for the presence of *se* vary across languages and constructions.

Let us now look at the working of this fourfold proposal. Let us start with intransitive predicates that do not receive a reflexive or reciprocal interpretation, like 'laugh' (97). For such verbs, the external argument is introduced by Voice using the denotation of Active Voice, as exemplified in (98).[35] Note that in the representations below, I treat simple sentence like (97) as sets of events, without including how existential closure and tense come in.

(97) Mary ri. (BP)
Mary laugh.PRS.3SG
'Mary laughs.'

[35]As some authors have suggested (e.g., Horvath and Siloni 2002; Wechsler 2005; Jerro 2016), there are some problems with the assumption that external arguments are introduced separately. We do not delve into these problems here, since Kratzer's proposal is used as one possible approach for the structure distinctions that we need to make. A discussion of the different views would take us too far afield.

(98)

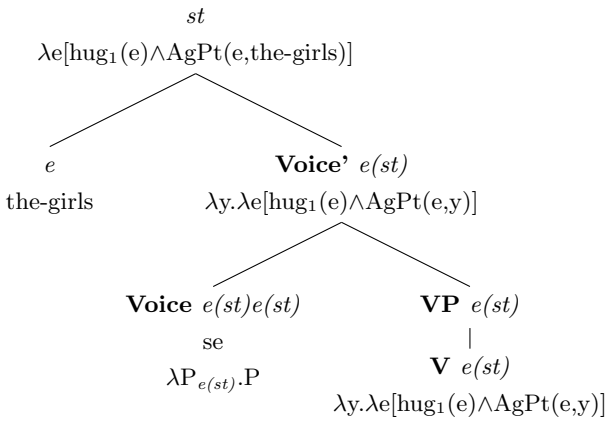


By contrast, VPs that are interpreted as reflexive/reciprocal are treated as containing an Agent variable. Let us first consider lexical reciprocals as in (99). With VPs headed by lexical reciprocals, the external argument variable is already part of the lexical entry, which contains the complex thematic role AgPt (100). The predicate is of type *e(st)*, and it cannot combine with Active Voice. Note that because the verb has a lexical reciprocal entry, which is assumed to be an R-marker, Condition B is also satisfied without *se*. Thus, the presence of *se* only depends on the syntactic requirements of the clause: in ±SE environments like BP finite clauses (99), *se* is optional.[36] This element does not introduce the external argument and does not have any reciprocal semantic content: it merely marks that the VP is reciprocal, by stating that no Agent variable is introduced in Voice. *Se* is semantically redundant, and the lexical reciprocal interpretation originates from the verb stem.

(99) As meninas (se) abraçaram. (BP)
The girls SE hug.PST.3PL
'The girls hugged.'
(=intransitive meaning of 'hug'; on the transitive meaning, see below)

[36]With lexical reciprocals like 'hug', *se* is obligatory in +SE constructions (like Italian finite clauses, such as (32b), §3) and disallowed in –SE environments (like Italian analytic causatives, see (40) in §3.2), though the reciprocal interpretation is equally accessible.

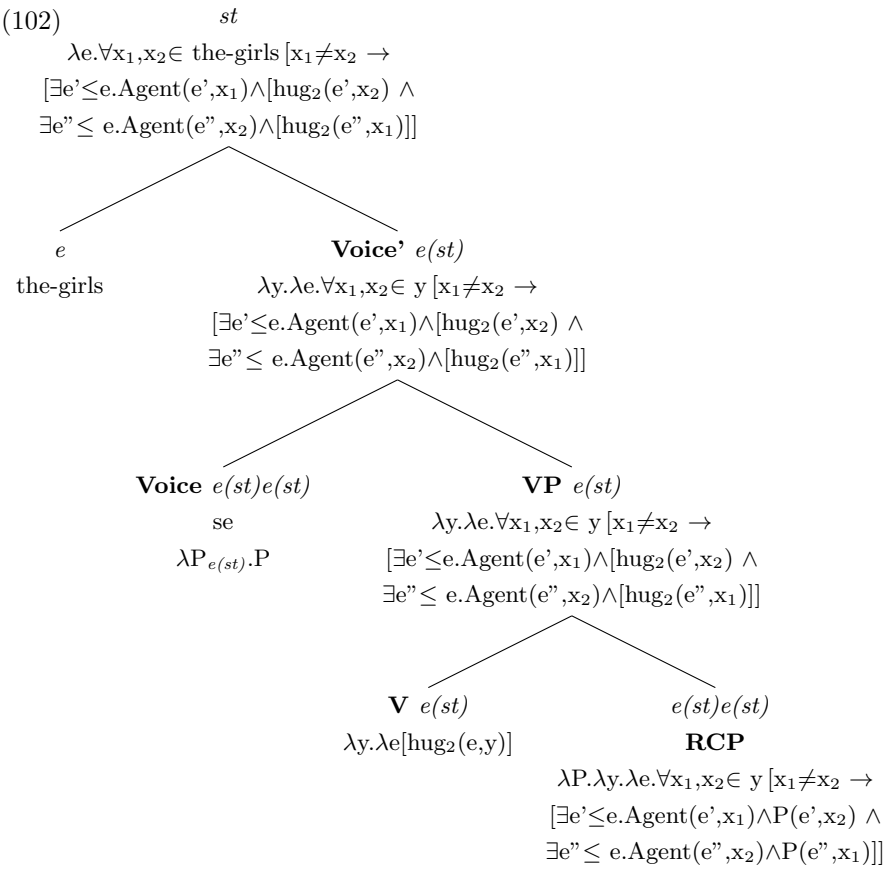
(100)



The variant of (99) with *se* also supports the grammatical strategy, which applies with the transitive meaning of 'hug'. This leads to ambiguity between lexical and grammatical reciprocity in *se*-clauses that contain a predicate that has a transitive entry and an intransitive reciprocal entry. Let us consider (101) below. The reading in (101i.) is the same that I analyzed in (100) above as stemming from the intransitive entry of 'hug'. The reading in (101ii.) is due to the transitive entry of 'hug', here reciprocalized using the covert operator RCP (102). The lexical reciprocal interpretation does not require *se* (as we saw in (99) above); by contrast, the grammatical reciprocal interpretation requires *se* to satisfy Condition B, because R-marking is performed neither by the transitive entry nor by the covert RCP operator. In this case, *se* is required for R-marking (although by itself it does not provide the reciprocal interpretation), whereas the covert RCP operator is responsible for the reciprocal interpretation (but it does not provide R-marking). Thus, although sentence (101) is treated as ambiguous between lexical reciprocity and grammatical reciprocity, the analysis unifies the role of *se* with the two strategies.

(101) As meninas se abraçaram. (BP)
The girls SE hug.PST.3PL
'The girls hugged.' (=100)
'The girls hugged each other.' (=102)

(102)



Let us now analyze more closely how grammatical reciprocal interpretations can emerge in different configurations. Example (103) below illustrates three different constructions expressing grammatical reciprocity in BP, using the unambiguously transitive predicate *descrever* 'describe'. I propose that grammatical interpretations consistently come from reflexive/reciprocal operators that can be realized overtly (e.g., BP *si mesmo/um o outro*) or covertly (RFL/RCP operators).

With *overt* operators, *se* is not required to satisfy Condition B, so the presence of this element depends on the syntactic requirements of the construction; in ±SE environments like BP finite clauses, overt operators can operate with *se* (103a) or without *se* (103b).[37] By contrast, *covert* operators are not

[37]With overt operators, *se* is obligatory in +SE constructions (like Italian finite clauses, see (75) in §5.1) and disallowed in –SE constructions (like Italian causatives, see (76) in §5.1), though grammatical reciprocal interpretations remain equally accessible.

morpho-phonologically realized and they cannot satisfy Condition B. Thus, they require *se* to mark the reflexive/reciprocal interpretation (103c), and cannot lead to reflexivity/reciprocity all by themselves (103d). In sum, in the clauses in (103a)-(103b) reciprocity is due to an overt reciprocal operator, whereas (103c) is reciprocalized by the covert operator RCP. Overt and covert operators only differ in the possibility of satisfying Condition B. In either case, they introduce the external argument variable and identify it with the internal argument of the verb. This results in a VP of type *e(st)* that cannot combine with Active Voice. The VP can combine instead with *se*, in syntactic constructions where this element is allowed or required. Once again, *se* does not have any reciprocal semantic content.

(103)	a.		As meninas	se	descreveram	uma a outra. (BP)
	b.		As meninas		descreveram	uma a outra.
	c.		As meninas	se	descreveram.	
	d.	*	As meninas		descreveram.	
			The girls	SE	describe.PST.3PL	one the other
			'The girls described each other.'			

Let us conclude by discussing the familiar ambiguity between reflexivity and reciprocity in *se*-clauses. The element *se* licenses both the reflexive covert operator RFL and the reciprocal covert operator RCP. Thus, *se*-clauses with a plural subject support both reflexive and reciprocal interpretations, and can be disambiguated by an overt operator or further contextual information. Furthermore, we saw that if the verb has a lexical reciprocal (or reflexive) entry, the clause receives an additional interpretation coming from the inherent meaning of the intransitive verb stem. The different interpretations associated with this three-way ambiguity have been explored in §4.3 with respect to sentence (56a), repeated below in (104). With the proposed analysis, we can now examine the emergence of these three readings. The pseudo-reciprocal reading in (104i.) is due to the inherent meaning of the intransitive entry of 'kiss' (kiss_1), derived as in (99). The grammatical readings in (104ii.)-(104iii.) contain the transitive 'kiss' (kiss_2), as in (102). The interpretation in (104ii.) is due to the covert reflexive operator RFL, whereas (104iii.) is due to the covert reciprocal operator RCP. As we saw, only the pseudo-reciprocal interpretation would remain accessible without *se*. This is explained by the fact that the lexical

reciprocal entry is inherently R-marked. By contrast, the interpretations in (104ii.)-(104iii.) would become inaccessible if *se* was omitted: this element is required to license the covert RFL and RCP operators.

(104) Mary e Lisa se beijaram. (BP)
Mary and Lisa SE kiss.PST.3PL
i. 'Mary and Lisa kissed.'
ii. 'Mary and Lisa kissed themselves.'
iii. 'Mary and Lisa kissed each other.'

One question that I have not explicitly addressed in this chapter regards the interaction between the interpretations in (104ii) and (104iii) above, and, more broadly, the nature of the polysemy between grammatical reflexivity and grammatical reciprocity in *se*-clauses.

The analysis presented above relies on the idea that grammatical reflexivity and grammatical reciprocity are derived from two distinct operators. This implies that plural *se*-clauses are ambiguous – and not underspecified – between grammatical reflexivity and grammatical reciprocity. So far, this assumption has been only relying on the parallelism between covert and overt operators; I proposed that the covert RFL and RCP operators have the same denotation of the overt reflexive and reciprocal operators. Given the lexical distinction between overt reflexive elements (e.g., *a si mesma*) and overt reciprocal elements (e.g., *uma a outra*), a lexical distinction between the covert operators is intuitively justified. Nonetheless, this question will be comprehensively addressed in Chapter 3, where I will show that an analysis which predicts ambiguity between reflexivity and reciprocity in Romance *se*-clauses is empirically more adequate than an analysis relying on underspecification.

7 Concluding remarks

Reciprocal and reflexive interpretations result from lexical and grammatical strategies that have been observed in several languages. In this chapter, I studied the case of Romance languages, where these two strategies are not always distinct. In these languages, many syntactic environments invariably require the element *se* for expressing a reciprocal meaning or a reflexive meaning. While this is a considerable obstacle for characterizing lexical reciprocity and

for studying the role of Romance *se*, in this chapter I have aimed to show that the challenge is not unsurmountable.

We have seen that Romance lexical reciprocals can be fruitfully studied based on properties that cross-linguistically characterize this class of predicates. I focused on Italian, Brazilian Portuguese, Spanish and Catalan. In these four language, I identified a class of verbs that, in constructions that vary between languages, express reciprocity without *se* (or other R-elements) and without giving rise to a reflexivity/reciprocity ambiguity. I showed that systematic semantic characteristics of such cases give substantial support to the existence of a class of lexical reciprocals in Romance, which show meanings that are fairly stable across languages.

Moving on to the role of *se* in the semantic derivation, I have pointed out that in the presence of an overt reciprocity/reflexivity operator, *se* can be omitted with unambiguously transitive verbs in the same environments where it is not required with lexical reciprocals. These data go against accounts of *se* as operating directly on the verbal valency, and support the treatment of *se* as a functional head projection, along the lines of Labelle (2008). I extended Labelle's analysis, arguing that *se* never has any reciprocal or reflexive semantics, although it has a central role in licensing reflexivity and reciprocity in the spirit of Reinhart and Reuland (1993).

The variety of distributions of *se* clitics in different Romance languages is quite remarkable and has not been addressed in this chapter. Yet, the chapter offers a unifying perspective on some of the central challenges by showing the ways in which syntactic projections, semantic types, binding conditions and covert operators interact in relation to lexical and grammatical functions. Further, the data and the theoretical perspective I proposed may also prove useful for studying non-Romance languages whose reciprocal markers are comparable to Romance, e.g. German (Everaert, 1986; Gast and Haas, 2008), Icelandic (Wood, 2014), Serbo-Croatian (Marelj, 2004), Polish and Slovenian (Rivero and Sheppard, 2003; Wiemer, 2007). Future studies may also reveal a contrast between the grammatical and lexical strategies beyond the Indo-European family, in other languages without clear distinctions between these two strategies. A larger language sample might support previous hypotheses about a class of lexical reciprocal and reflexive meanings that are more or less stable across different languages.

CHAPTER 3

The ambiguity between reflexivity and reciprocity in Romance languages

1 Introduction

In Romance languages, reflexivity and reciprocity are expressed using the same form. In Italian finite clauses, both interpretations are associated with the element *se* when the subject is plural: the sentence in (105) can either be interpreted with Mary and Lisa observing themselves or observing each other. Since reciprocity requires plural arguments, only reflexive interpretations are available with a singular subject, as in (106).

(105) Mary e Lisa si osservano. (It)
Mary and Lisa SE observe.PRS.3PL
i. 'Mary and Lisa observe themselves.'
ii. 'Mary and Lisa observe each other.'

(106) Mary si osserva. (It)
Mary SE observe.PRS.3SG
'Mary observes herself.'

Romance languages are not an isolated case in this respect. A number of studies highlighted that reflexivity and reciprocity are associated with the same

grammatical forms across several languages (Lichtenberk, 1985; Maslova and Nedjalkov, 2005; Nedjalkov et al., 2007; König and Gast, 2008).

The widespread nature of this pattern has led to questions about the relation between reflexivity and reciprocity in languages that use the same form for both meanings. An issue that has been raised in the literature pertains to whether reflexive/reciprocal constructions are ambiguous or underspecified between these two interpretations. This question holds significant implications for the semantics of reflexivity and reciprocity: investigating the nature of this polysemy is crucial in order to understand how these two meanings interact, and whether they require to be analyzed independently of one another.

Heine and Miyashita (2008) argued that clauses that receive a reflexive and a reciprocal interpretation are *ambiguous* between these two meanings. Their assumption is grounded in conceptual considerations. One of the ideas underpinning their generalization is that speakers of languages that do not morphologically distinguish between reflexivity and reciprocity are nonetheless aware of the semantic distinction between the two, and often have grammatical means of distinguishing them (such as pronominal or adverbial elements).

In contrast, some proposals argued in favor of an analysis of reflexive/reciprocal constructions in terms of *underspecification*. These approaches suggest that reflexivity and reciprocity are two possible interpretations of the same general meaning (McGregor, 2000; Cable, 2012; Haug and Dalrymple, 2018). In support of this type of analysis, Murray (2008) argued that the Cheyenne reflexive/reciprocal verbal affix *-ahte* allows a so-called 'mixed' interpretation: an interpretation that is partially reflexive and partially reciprocal. A possible instance of a 'mixed' scenario would involve a plurality of individuals, some of which perform an action on themselves and others perform an action on each other. A visual representation of a possible 'mixed' scenario is provided in Figure 3.1, where A, B, C and D stand for four different individuals.

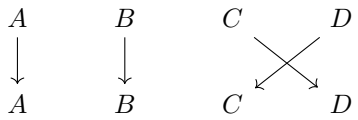


Figure 3.1: Possible reflexive/reciprocal 'mixed' reading.

According to Murray (2008), Cheyenne plural clauses with the affix *-ahte* accurately capture situations like the one depicted in Figure 3.1. The concurrent

availability of reflexive and reciprocal interpretations was taken as evidence for the underspecified nature of the clause, where reflexivity and reciprocity are two senses of the same overarching meaning encompassed by *-ahte*. The studies that proposed underspecification between reflexivity and reciprocity made this prediction based on the specific languages they examine, e.g., Cheyenne in Murray (2008) or Nyulnyulan languages in McGregor (2000). It remains an open question whether the underspecification analysis would hold for all languages that do not overtly distinguish between reflexivity and reciprocity.

Throughout this chapter, I will provide a negative answer to this question: focusing on Romance, I will show that the underspecification analysis does not work for this group of languages. I will primarily concentrate on Italian and Brazilian Portuguese (BP), and I will argue in favor of a treatment of *se*-clauses as ambiguous between reflexivity and reciprocity. The proposal will be grounded in the empirical observation that in Italian and BP plural *se*-clauses, mixed readings like those exemplified in Figure 3.1 are available only with a certain subclass of verbs. The chapter concentrates on the characterization of this class of verbs, and on the reasons for their special semantic behavior in *se*-clauses.

We will see that the acceptance of mixed readings is higher with verbs that I categorize as lexical reflexives, using similar criteria as those employed for reciprocals in Chapter 2. I argue that this is due to the intrinsic reading of lexical reflexive verbs: across different languages, they support situations where there is no strict identity between agent and patient (Doron and Rappaport Hovav, 2009; Haspelmath, 2023), so they can possibly encompass mixed situations when they take a plural argument. Let us consider the English verb *bathe*. The sentence in (107) below may receive an interpretation in which Mary was bathed by someone else, as long as she was volitional. This lexical semantic characteristic automatically supports mixed scenarios: a plural sentence like (108) below is considered true if Mary and Lisa voluntarily bathed each other, while Irene and Leila bathed themselves. This kind of situation satisfies the volition requirement of the reflexive entry, which supports mixed scenarios where the participants are voluntarily bathed (by themselves or by others).

(107) Mary bathed.

(108) Mary, Lisa, Irene and Leila bathed.

Thus, I argue that the availability of mixed readings in Romance is independent of the morphological identity between reflexive and reciprocal strategies.

These readings are a semantic epiphenomenon of the same specific lexical reflexive entries that lead to mixed readings in other languages, also if, like English, they show a clear grammatical reflexivity/reciprocity ambiguity.

The emerging empirical findings provide independent motivation for the analysis proposed in Chapter 2, where grammatical reflexivity and reciprocity are attributed to two distinct (possibly covert) operators, both of which may require *se* in their encoding. Thus, I will argue in favor of an analysis where Romance *se*-clauses are ambiguous, but *se* is not lexically ambiguous itself.

The chapter is organized as follows. In §2 I discuss the notions of ambiguity and underspecification in relation to the status of reflexive/reciprocal constructions. In §3 I review the distinction between lexical and grammatical reflexivity, discussing the structural properties and the interpretation of lexical reflexive predicates across different languages. In §4 I unveil the distinction between lexical and grammatical reflexivity in Romance languages: we will see that Romance lexical reflexives may denote reflexive configurations all by themselves, without *se*, and their inherent meaning allows the same array of interpretations as lexical reflexives in other languages. In §5 I present two questionnaires conducted on Italian and Brazilian Portuguese, showing that reflexive/reciprocal mixed interpretations are accepted in *se*-clauses containing lexical reflexive predicates, but less so with ordinary transitive verbs. In §6 I review these empirical findings as support for an ambiguity treatment of *se*-clauses, where reflexivity and reciprocity are expressed by two distinct operators. §7 wraps up the chapter.

2 Terminology and previous studies

In this chapter, I use the term *ambiguity* to refer to the existence of two different semantic representations that correspond to two designated kinds of situations. With respect to the reflexivity/reciprocity distinction, ambiguity is described using two different operators for these two meanings: one operator conveying reflexivity and one operator conveying reciprocity. By *underspecification* I refer to a meaning that is general enough to cover different types of situations. Concerning the question of reflexivity and reciprocity, underspecification is defined in terms of one single operator, covering both reflexive and reciprocal situations.

In the literature, various tests have been proposed to determine whether an

expression is ambiguous or underspecified. In this chapter, I will specifically examine the *identity test*. The identity test (Zwicky and Sadock, 1975) is a variation of the more well-known *zeugma test* (discussed in Lakoff 1970, Tuggy 1993, *inter alia*). The underlying idea is that if two different interpretations of the same predicate are available when applied to a plural or a conjoined argument, then the predicate is considered vague between the two senses, otherwise it is deemed ambiguous.

Let us see this in action with an example. The possibility of the sentence in (109) of describing a context where A is a girl and B is a boy, suggests that the lexical item *child* must be underspecified in terms of gender. On the other hand, (110) cannot accurately describe a situation where A refers to a financial institution and B refers to a river bank. The fact that the lexical item *bank* in (110) cannot cover the two different senses simultaneously suggests that it must be ambiguous between these two interpretations.

(109) A and B are children.
(context: A is a girl and B is a boy)

(110) # A and B are banks
(context: A is a monetary institution and B is a river bank)

The identity test can be used to determine the nature of linguistic expressions that lead to both reflexive and reciprocal interpretations. If such an expression accommodates a scenario where some individuals act on themselves and some act on each other, then the identity test predicts underspecification between reflexivity and reciprocity. By contrast, if it fails to support such a mixed reflexive/reciprocal scenario, then the test predicts ambiguity between reflexivity and reciprocity.

The identity test was used in relation to reflexivity and reciprocity by Murray (2008) on Cheyenne, a language where both reflexivity and reciprocity are conveyed by the same verbal affix *-ahte*. According to Murray, plural clauses with *-ahte* can depict a mixed reflexive/reciprocal situation. This is exemplified in the context of the verb 'scratch': the sentence in (111) below is claimed to be true in a situation where some children scratched themselves and some other children scratched each other.

(111) Ka'èškóne-ho é-axeen-ahtse-o'o. (Cheyenne)
child.PL.AN 3-scratch.AN-*ahte*-3PL.AN
'Some children scratched themselves/ each other.'
(Murray, 2008, p. 215)

Cable (2012) claimed that Murray's generalization also holds for Romance languages. Based on examples from Italian, Portuguese, Spanish and French, Cable argued that mixed readings are available in Romance *se*-clauses, and – accordingly – that the underspecification analysis of reflexivity/reciprocity is applicable to this group of languages.

Against this claim, I will argue that mixed readings are not at all generally available in Romance. I will show that mixed reflexive/reciprocal readings may emerge in specific cases, but they are not generally accessible in plural *se*-clauses with transitive verbs. For example, the Italian clause in (112) below cannot truthfully describe a scenario where Anna punishes herself while Bea and Clio punish each other.

(112) # Anna, Bea e Clio si puniscono. (It)
Anna, Bea and Clio SE punish.PRS.3PL
'Anna, Bea and Clio punish themselves/each other.'
(context: A punishes herself, B and C punish each other)

We seem to be facing a discrepancy in judgments: while Cable (2012) argued that mixed readings are generally available in Romance languages, speakers that I consulted did not accept them in many examples similar to (112). As I will aim to show in the rest of this chapter, this is only an apparent conflict: under some conditions, mixed readings do appear in Romance, to a similar extent as in English or other languages. These conditions are related to the inherent interpretation of lexical reflexive predicates, and the distinction between lexical reflexive entries and grammatical operators, as studied for reciprocity in Chapter 2.

3 Lexical and grammatical reflexivity

In Romance plural *se*-clauses that feature ordinary transitive verbs, reflexivity and reciprocity are equally accessible.[1] Transitive verbs such as 'punish', 'thank'

[1]Possible pragmatic preferences, world-knowledge or contextual information may favor one interpretation over the other. For example, the Italian sentence in (i) below has a more salient

or 'observe', which have no intrinsic reflexive or reciprocal meaning, can receive both reflexive and reciprocal interpretations in plural *se*-clauses.

It is questionable whether such constructions can receive mixed interpretations, as example (112) above illustrates. However, before dismissing mixed readings as unavailable altogether in Romance, it is crucial to consider the semantics of lexical reflexive verbs like 'wash' or 'get dressed'. We will see that these predicates may be in line with mixed reflexive/reciprocal interpretations, but this possibility follows from their lexical meaning rather than from a productive grammatical operation.

3.1 Structural and semantic distinctions

Many languages overtly distinguish between two strategies leading to reflexive interpretations: *grammatical* reflexivity and *lexical* reflexivity. This distinction is parallel to what we observed in Chapter 2 with respect to reciprocity. By *grammatical* reflexivity, I refer to the productive strategy by which any transitive verb can convey a reflexive interpretation. In English, grammatical reflexivity is realized with the reflexive pronoun *oneself*, as shown in (113) below. Productive reflexive elements are illustrated below for Greek (114), Hebrew (115), Finnish (116) and Wolof (117).[2]

(113) John described/shaved himself.

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reflexive interpretation, whereas (ii) is more saliently reciprocal.

(i) Mary e Lisa si osservano allo specchio. (It)
Mary and Lisa se observe.PRS.3PL at.the mirror
'Mary and Lisa observe themselves/each other in the mirror.'

(ii) Mary e Lisa si osservano con amore. (It)
Mary and Lisa se observe.PRS.3PL with love
'Mary and Lisa observe themselves/each other with love.'

[2]The examples in this section that are not extracted from the literature rely on the judgments of native speakers that I dearly thank. I am especially grateful to James Hampton and Caroline Asken (English), to Konstantinos Kogkalidis and Antonis Matakos (Greek), to Aviv Schoenfeld and Alon Fishman (Hebrew), and to Katarina Merilahti (Finnish). For the Wolof judgments, I am grateful to two native speakers of Dakar Urban Wolof, whose anonymity must be maintained in compliance with the data collection agreements approved by the Faculty Ethics Assessment Committee Humanities (FEtC-H) of Utrecht University.

(114) O Babis periegrapse ton eafto tou. (Greek)
the Babis describe.PST.3SG himself
'Babis described himself.'

(115) Dani gileax et acmo. (Hebrew)
Dani shave.PST himself
'Dani shaved himself.'
(Doron and Rappaport Hovav, 2009, p.93)

(116) Otso kuvailee itseänsä. (Finnish)
Otso desribe.PRS.3SG himself
'Otso is describing himself.'

(117) John gis na boppam. (Wolof)
John see PFV head.3S.POSS
'John saw himself.'
(Tamba, 2008, Id:5830)

Grammatical reflexivity implies the identification of two thematic roles. In the examples in (113)-(117) above, the subjects denote entities that act as both an agent and a patient in the described event. For instance, in (113) John is the entity describing or shaving John.[3] I use the term *plain reflexivity* to describe the interpretation of grammatical reflexive predicates, where two thematic roles are identified.

In contrast to grammatical reflexivity, I use the term *lexical* reflexivity for the strategy by which a closed class of predicates can convey reflexivity through the inherent meaning of the intransitive verb stem. These verbs typically denote grooming or body-related actions that fall into the characterization of 'naturally reflexive' events (Kemmer, 1993). Lexical reflexivity is available with zero morphology in English (118), but it requires some marking in other languages. For instance, Greek lexical reflexive predicates appear with non-active morphology (119), in Hebrew they can appear in the *hitpael* template (120), whereas in Finnish they can bear the verbal affix *-utu-* (121), and in Wolof they are accompanied by the verbal suffix *-u* (122).

[3]It has been noted that in some languages, instances of grammatical reflexivity are also in line with a so-called 'proxy reading', where the referent of the object is a sufficiently close copy of the referent of the subject, and it can serve as a proxy for it (Jackendoff, 1992; Lidz, 1997; Reuland, 2001). For instance, in the context of a visit to a wax museum, the English clause with *himself* in (113) may describe a scenario where John described or shaved a statue of himself.

(118) John shaved.

(119) O Babis ksiristike. (Greek)
the Babis shave.NACT.PST.3S
'Babis shaved.'

(120) Dani hitgaleax. (Hebrew)
Dani shave.PST.REFL
'Dani shaved.'
(Doron and Rappaport Hovav, 2009, p.93)

(121) Otso puke-utu-i. (Finnish)
Otso dress-REFL-PST.3SG
'Otso got dressed.'

(122) Khady sang-u na. (Wolof)
Khady wash-REFL PFV
'Khady washed.'

The interpretation of lexical reflexive verbs differs subtly from the interpretation of grammatical reflexives. It has been noted that lexical reflexive predicates do not strictly require the identification of two thematic roles, and their subject generally corresponds to the patient role (Doron and Rappaport Hovav, 2009; Haspelmath, 2023). For instance, in the English example in (118) above, John corresponds to the patient of the shaving event, but not necessarily to the agent physically performing the shaving. The sentence can be true if John shaved his beard, but also if someone else shaved him (e.g., a barber), as long as this happened on John's own accord. This observation holds for the examples of lexical reflexivity above: the sentences in (118)-(122) are acceptable in a scenario where the subject corresponds to the agent and patient, or where the subject is a consensual and volitional patient, while the agent carrying out the action is unspecified. I refer to the interpretation of lexical reflexive verbs as *pseudo-reflexive*, and standardly assume that it emerges from the verb's intransitive entry and not from a process of argument binding in the syntax.

Grammatical reflexives do not require volition of their patient (which is identical to the agent).[4] By contrast, volition of the argument may improve

[4]Volition in such n-ary constructions, or the lack thereof, only arises by virtue of the meaning of the n-ary predicate. Thus, *John shaved himself* does not require John's volition for the same reason that *John shaved Ali* does not.

the acceptability of lexical reflexives, and it can make lexical reflexive forms acceptable in situations where the patient does not correspond to the entity performing the action described by the verb. For example, in an unfriendly scenario where John was forced to shave himself against his will, the grammatical reflexive form in (113) may be considered true, whereas the lexical reflexive form in (118) is deviant.[5] Conversely, in a situation where John was shaved by someone other than himself, the grammatical reflexive form in (113) cannot be considered true, whereas the lexical reciprocal form in (118) may be accepted if John was volitional. This can be summarized as follows:

Grammatical reflexives require identity between two arguments of a binary predicate (possibly by proxy, see note 3), but not all lexical reflexives require strict identity.

Lexical reflexives may require more volition of their argument than parallel grammatical reflexives.

I assume that this requirement in grammatical reflexives results from the identification of two arguments. Conversely, I assume that lexical reflexives are predicates with only one argument, which is assigned a complex thematic role that allows both agent-like and patient-like properties.

The contrast between the interpretation of grammatical reflexives and the pseudo-reflexivity of lexical intransitives like *shave* shows that the the meaning of the latter cannot be directly derived from transitive *shave*. This is a parallel observation to what has been illustrated for the pseudo-reciprocity reading of lexical reciprocal predicates in Chapter 2.

3.2 Reflexive interpretations with plural arguments

When applied to a plurality, pseudo-reflexive interpretations may encompass the mixed reflexive/reciprocal scenarios discussed in the previous section.

Let us consider the English sentence with the lexical reflexive verb *shave* in (123) below. Suppose that the pseudo-reflexive reading holds for each individual in the subject set. In that case, each of the boys in the denotation of the subject

[5] Although deviant, such a sentence may not be necessarily rejected altogether by some speakers. The volition of the argument is not strictly required for lexical reflexives as long as agent and patient are identical. Yet, volition may contribute to the acceptability of a lexical reflexive form if agent and patient do not correspond. I assume that this is due to the argument of a lexical reflexive requiring at least some agent-like properties.

was shaved, either by himself or by someone else, showing consent with the act.

(123) The boys shaved for the graduation ceremony.

Accordingly, (123) can be true if each boy shaved his own beard, if every boy went to the barbershop for a shave, or if the boys in the subject group shaved one another on their own accord. Crucially, the sentence would also be true if some of the boys shaved their own beard, and some other agreed on shaving each other's beards. This mixed interpretation is just one of the possible scenarios resulting from the pseudo-reflexive reading.

The case of English straightforwardly illustrates that plural pseudo-reflexive readings may encompass mixed situations, and that this is independent of the availability of mixed readings between grammatical reflexivity and reciprocity. In English, grammatical reflexivity and grammatical reciprocity have different forms, and mixed readings between the two are not generally accessible. The dedicated reflexive/reciprocal pronominal elements unambiguously lead to grammatical reflexivity (124a) or grammatical reciprocity (124b), with no option for a mixed reading between the two.[6]

(124) a. The boys described themselves.
b. The boys described each other.

Similarly to English, plural pseudo-reflexive readings can encompass mixed situations across unrelated languages with no morphological correspondence between grammatical reflexivity and grammatical reciprocity.[7] The examples

[6]In English, a potential counterexample to this generalization could be represented by plural reflexive elements preceded by the preposition *among*, as in (i). Such cases, defined 'collective reflexivity' in Gast and Haas (2008), have an interpretation that leans towards a collective sense, implying a shared action among the individuals involved.

(i) The boys were whispering among themselves.

These constructions intuitively appear to be potential candidates for mixed reflexive/reciprocal interpretations, but further research is needed to assess whether such interpretations are indeed supported. If mixed readings were to be found in languages like English to the same extent as in parallel constructions across languages that do not morphologically distinguish between reflexivity and reciprocity, this could be an indication that the acceptability in such constructions is independent of the underspecification thesis. These cases fall outside the scope of the current chapter, and will not be addressed here.

[7]For an overview of the strategies leading to (grammatical) reflexivity and reciprocity in the languages considered below, see Dimitriadis (2008b) and Spathas et al. (2015) for

below are illustrative for Greek (125), Hebrew (126), Finnish (127) and Wolof (128). The sentences support a mixed reflexive/reciprocal configuration: in a scenario where the individuals in the subject set had the action performed on themselves and were volitional, speakers accept the following sentences as true.

(125) O Babis, o Nikos kai o Akis ksiristikan. (Greek)
the Babis the Nikos and the Akis shave.NACT.PST.3PL
'Babis, Nikos and Akis shaved.'
(context: Babis shaved himself, Nikos and Akis shaved each other)

(126) Micha, Ido ve-Ron hitgalxu. (Hebrew)
Micha Ido and Ron shave-REFL
'Micha, Ido and Ron shaved.'
(context: Micha shaved himself, Ido and Ron shaved each other)

(127) Otso, Joni ja Milla puke-utu-ivat. (Finnish)
Otso Joni and Milla dress-REFL-PST.3PL
'Otso, Joni and Milla got dressed.'
(context: Otso dressed himself, Joni and Milla dressed each other)

(128) Khady, Fatou ak Musaa sang-u na. (Wolof)
Khady Fatou and Musaa wash-REFL PFV
'Khady, Fatou and Musaa washed.'
(context: Khady washed herself, Fatou and Musaa washed each other)

Given that pseudo-reflexive readings can be found across different languages, and that their plural form can subsume mixed interpretations, it is crucial to take this confound into account when examining mixed reflexive/reciprocal readings as evidence for ambiguity or underspecification. In the next section, we will delve into the case of Romance languages: I will identify lexical reflexive predicates and I will consider their interpretation in relation to the research question of this chapter.

4 Lexical reflexivity in Romance languages

This section proposes a distinction between lexical and grammatical reflexivity in Romance. The distinction is parallel to the lexical/grammatical opposition

Greek; Doron (2003) and Reinhart and Siloni (2005) for Hebrew; Karlsson (1999) for Finnish; Creissels and Nouguier-Voisin (2008) and Ros and Palmieri (Forthcoming) for Wolof.

observed with respect to reciprocals in Chapter 2, and it relies on the same structural categorization. I identify predicates that receive a reflexive interpretation without *se* and without other reflexive items, and I argue that they have a lexical reflexive entry and the same semantic properties of similar intransitives in English.

As seen in Chapter 2, BP allows the omission of *se* in finite clauses with verbs that have a lexical reciprocal entry; this observation also applies to reflexivity. In BP, *se* is productive and it accompanies reflexive interpretations with all transitive verbs, like *descrever* 'describe' in (129) below. This sentence has a plain reflexive interpretation: Mary must be the entity who described Mary. However, a closed class of verbs, including *depilar* 'depilate, remove body hair, shave' (130), can express reflexivity with *se* (130a) or without *se* (130b).[8]

(129) Mary se descreveu. (BP)
Mary SE describe.PST.3SG
'Mary described herself.'

(130) a. Mary se depilou. (BP)
Mary SE depilate.PST.3SG
i. 'Mary shaved.'
ii. 'Mary shaved herself.'

b. Mary depilou.
Mary despilate.PST.3SG
'Mary shaved.'

The sentence with *se* in (130a) supports a situation where Mary volitionally went to the beautician for depilation, as well as a grim situation where Mary was forced to depilate herself. These two kinds of interpretations are characteristic of lexical reflexivity and grammatical reflexivity respectively, as the English translations of (130a) indicate. By contrast, the version without *se* in (130b) is only in line with a pseudo-reflexive reading: the sentence is acceptable in a context where Mary was shaved by a beautician on her own accord, but it does not support an unfriendly situation where Mary was forced to shave herself against her will. Thus, if reflexivity emerges from the verb alone, without *se*, the licensed interpretation is pseudo-reflexive.

[8]Unlike English *shave*, the verbs *depilar* (BP) and *depilare* (It) refer to the removal of body hair, without any specification of the instrument used. I gloss these verbs with English *depilate*, but I use *shave* in the free translations of the examples, due to the similar semantic effects of pseudo-reflexivity discussed below.

Unlike BP, the majority of Romance languages do not generally license reflexive interpretations with the verb alone in finite clauses. In the absence of other reflexive elements, any Italian verb with a transitive entry requires *se* to convey a reflexive meaning in finite clauses. This is the case for verbs that do not have meanings that fall into Kemmer's (1993) categorization of 'naturally reflexive' events, like 'describe' in (131), as well as for verbs with meanings associated to 'naturally reflexive' events, such as grooming verbs like 'depilate, remove body hair, shave' in (132).

(131) Mary si descrive. (It)
Mary SE describe.PRS.3SG
'Mary describes herself.'

(132) Mary si depila. (It)
Mary SE depilate.PRS.3SG
i. 'Mary shaves.'
ii. 'Mary shaves herself.'

Yet, also in Italian and other Romance languages there are environments where verbs with meanings associated to Kemmer's class of 'naturally' reflexive events can appear without *se*. These are the same environments that allow reciprocity without *se*, as discussed in Chapter 2. For instance, Doron and Rappaport Hovav (2009) observed that French lexical reflexives that require *se* in finite clauses can nonetheless denote reflexive configurations without *se* in analytic causatives. An example involving the verb 'dress' is provided below in (133).

(133) La Poste fait habiller ses employés avec des tee-shirts.
the post make.PRS.3SG dress.INF its employees with PA t-shirts.
(French)

'The post-office makes its employees dress in t-shirts.'
(Doron and Rappaport Hovav 2009, p. 96, my glosses)

The same observation extends to Italian, where analytic causatives do not tolerate *se*. As we saw in Chapter 2, with transitive verbs like 'describe', this results in a passive interpretation where the direct object is the patient of action described by the verb (134). However, with certain verbs, both a passive reading and a reflexive reading are available in causatives. This is the case with 'depilate' in (135) below: the sentence can be interpreted with Mary being depilated by a third party (135i) or with Mary depilating herself (135ii). Note that this latter interpretation is distinct from the passive reading, which forbids identity between the two thematic roles, and which is not accessible with the verb 'describe' in (134).

(134) Ho fatto (*si) descrivere (*si) Mary. (It)
have.AUX.1SG make.PTCP SE describe.INF SE Mary
'I caused Mary to be described.'

(135) Ho fatto (*si) depilare (*si) Mary. (It)
have.AUX.1SG make.PTCP SE depilate.INF SE Mary
i. 'I caused Mary to be shaved.'
ii. 'I caused Mary to shave.'

Similar facts hold for absolute clauses in Spanish and Catalan. In both languages, absolute clauses receive a passive interpretation with transitive verbs (136a)-(137a), but with a closed class of verbs – all denoting grooming and body-related actions – a reflexive interpretation is also available (136b)-(137b).

(136) a. Agradecido Juan salió de casa. (Sp)
thank.PTCP Juan leave.PST.3SG from house.
'After being thanked, Juan left the house.'

b. Afeitado Juan salió de casa.
shave.PTCP Juan leave.PST.3SG from house.
i. 'After being shaved, Juan left the house.'
ii. 'After shaving, Juan left the house.'

(137) a. Agraït en Joan va sortir de casa. (Ca)
thank.PTCP the Joan go.PRS.3SG leave.INF from house
'After being thanked, Joan left the house.'

b. Rentat en Joan va sortir de casa.
wash.PTCP the Joan go.PRS.3SG leave.INF from house
i. 'After being washed, Joan left the house.'
ii. 'After washing, Joan left the house.'

In the BP examples in (130) we observed that clauses without *se* receive a pseudo-reflexive interpretation. Pinpointing this reading becomes more challenging in the context of causative and absolute constructions, which also license a passive interpretation. Because the critical scenarios covered by pseudo-reflexivity entail passive interpretations, it is harder to show that the reflexive interpretations that emerge without *se* in (133), (135), (136b) and (137b) are specifically pseudo-reflexive. Nevertheless, I argue that the pseudo-reciprocal interpretations in the sentences above do not originate from the passive readings. In fact, the same verbs also exhibit pseudo-reflexivity in simple finite clauses where no passive interpretation is accessible. Furthermore, reflexive interpretations that emerge without *se* are in line with the pseudo-reflexive reading also in BP finite clauses, in the absence of passive interpretations.

Based on the data above, for a given verb, I take the possibility of receiving a reflexive interpretation all by itself as an indication of a lexical reflexive entry, as defined in (138):

(138) **Romance lexical reflexives**: *In a Romance language, I characterize as lexical reflexives those verbs for which there are syntactic constructions (whose identity is determined by language-specific parameters) where a reflexive interpretation emerges without* se *or another reflexivity element.*

Accordingly, I argue that verbs like 'shave', 'dress' or 'wash' have two entries. First, they have an intransitive entry with an inherent reflexive meaning, associated with pseudo-reflexive readings. Secondly, they have a transitive entry, observable in clauses like (139) below, that can be the basis of a reflexive interpretation through the grammatical reflexive strategy. This derivational option leads to a plain reflexive interpretation, as seen earlier in the example with *se* in (130a).

(139) A esteticista depilou a Mary. (BP)
the beautitian depilate.PST.3SG the Mary
'The beautitian shaved Mary'.

As the BP examples in this section showed, lexical reflexive predicates retain their pseudo-reflexive reading with and without *se*. These observations are in line with the findings on reciprocity from the previous chapter, and they complement the generalizations on *se* and lexical reciprocity as follows:

(140) **SE generalizations – lexical reflexivity/reciprocity**:

a. *Se*-clauses without an additional reflexive/reciprocal item can have access to a plain reflexive or plain reciprocal interpretation.

b. Certain verbs (with a transitive entry) can appear without *se* or other reflexive/reciprocal items. If such a sentence without *se* receives a pseudo-reflexive interpretation, the verb has a *lexical reflexive* entry; if such a sentence without *se* receives a pseudo-reciprocal interpretation, the verb has a *lexical reciprocal* entry

c. The pseudo-reflexive/reciprocal reading of these verbs is retained with an overt *se*. Thus, *se*-clauses with lexical reflexives (reciprocals) are ambiguous between pseudo-reflexivity (reciprocity) and plain reflexivity (reciprocity), on top of their standard reflexive/reciprocal ambiguity.

We have identified lexical reflexivity as a factor that may in principle influence the availability of mixed readings, and we have identified verbs in Romance that I characterized as lexical reflexives. Building on this distinction, I propose that:

(i) Romance lexical reflexive verbs allow a mixed interpretation with a plural subject.

(ii) Romance verbs that are not lexical reflexives do not allow a mixed reading with a plural subject.

I argue that the unavailability of mixed interpretations in *se*-clauses with transitive verbs (that are lexically neither reflexive nor reciprocal) substantiates the analysis of such constructions as ambiguous between grammatical reflexivity and grammatical reciprocity. The next section supports this proposal with data from Italian and BP.

5 Empirical support for ambiguity

Lexical reflexivity and its possible effects on the availability of mixed reflexive/reciprocal interpretations have not been explicitly taken into account in the literature. According to studies that examine mixed readings in support of the underspecification thesis (Murray, 2008; Cable, 2012), we would expect mixed interpretations to emerge in Italian and BP, regardless of the verb in

the sentence. By contrast, I hypothesize that mixed interpretations are only available with lexical reflexive verbs, as I assume that such interpretations only emerge from a pseudo-reflexive, intransitive meaning.

To back up this hypothesis, I collected judgments from native speakers through two similar questionnaires, one on Italian and one on BP.[9] The questionnaires aimed at assessing the acceptability of *se*-clauses to describe pseudo-reflexive and mixed situations, both for verbs that are characterized as lexical reflexive and for transitive verbs without a lexical reflexive or reciprocal entry.

The questionnaires consisted of short written stories, accompanied by a finite *se*-construction containing one of the target verbs. Participants were asked to make a truth-value judgment on the sentence relative to the given story. All the stories were different from each other. Each verb was tested in two scenarios:

(i) pseudo-reflexive scenario: a story with an individual A who volitionally had an action performed on herself by another person.
This scenario was followed by a target sentence containing the construction: 'A *se* VERB', to be judged true or false by the participant.

(ii) 'mixed' scenario: a story with four individuals A, B, C and D, where two individuals carried out an action on themselves, whereas the other two carried out the same action on each other.
This scenario was followed by a target sentence containing the construction: 'A, B, C and D *se* VERB', to be judged true or false by the participant.

A list of the stories presented to participants is provided in `https://doi.org/10.24416/UU01-651QVL`.

The underspecification approach predicts that verbs should show mixed interpretations in (ii), independently of whether they show pseudo-reflexive readings in (i). By contrast, I hypothesize that pseudo-reflexivity in (i) should boost acceptance of mixed readings in (ii).

For each questionnaire, ten target verbs were selected according to the grammatical criterion of *se* omission in singular sentences: five lexical reflexives and five transitive verbs. The questionnaires contained filler stories accompanied by questions with an indisputable true or false answer, that were used to assess the attention of participants. Both questionnaires were run online with *LimeSurvey* and the participants did not receive any monetary compensation.

[9]The questionnaire on BP was carried out in collaboration with Renato Basso, whom I dearly thank for his contribution to the BP stories.

5.1 Questionnaire on Italian

The Italian questionnaire contained ten target verbs: five transitive verbs and five lexical reflexive verbs. The verbs were selected based on the possibility of expressing or not expressing reflexivity without *se* in analytic causatives. The selected target verbs are presented in Table 3.1 below.

transitive	**lexical reflexive**
ammirare 'admire'	*depilare* 'depilate, remove body hair'
criticare 'criticize'	*lavare* 'wash'
premiare 'reward'	*pettinare* 'comb'
punire 'punish'	*truccare* 'put on makeup'
votare 'vote'	*vestire* 'get dressed'

Table 3.1: Target verbs of the Italian questionnaire.

Procedure

Each participant was exposed to five target items and ten filler items; no participant was exposed to the same target verb more than once. The target items were divided among four versions of the questionnaire, and each participant was randomly assigned to one of them. Each version contained five target items. They were either two (three) lexical reflexives in pseudo-reflexive scenarios and three (two, respectively) transitive verbs in mixed scenarios, or two (three) lexical reflexives in mixed scenarios and three (two) transitive verbs in pseudo-reflexive scenarios.

Participants

527 participants took part in the questionnaire. The results below are for 373 participants selected based on 100% accuracy on the fillers.

Results

The results of the questionnaire are illustrated in Table 3.2. The table displays the acceptance rate of each verb per scenario, i.e. the percentage of participants that answered 'true' to the pseudo-reflexive and mixed scenario with that verb. In pseudo-reflexive scenarios, transitive verbs showed a very low acceptance rate (with an average of 4%), whereas lexical reflexives were widely accepted (average of 78%). Similarly, in mixed scenarios, transitive verbs had a low acceptance rate

(29% on average), whereas lexical reflexives were almost unanimously accepted (96% on average).

verb class	**verb**	**pseudo-refl.**	**mixed**
transitive	*ammirare* 'admire'	0 %	10 %
	criticare 'criticize'	6 %	24 %
	punire 'punish'	13 %	35 %
	premiare 'reward'	0 %	39 %
	votare 'vote'	1 %	39 %
	average	**4%**	**29%**
lexical reflexive	*depilare* 'depilate'	83 %	98 %
	lavare 'wash'	78 %	97 %
	pettinare 'comb'	42 %	96 %
	truccare 'put on makeup'	87 %	92 %
	vestire 'get dressed'	98 %	96 %
	average	**78%**	**96%**

Table 3.2: Acceptance rates for Italian verbs.

Discussion

The results lend support to the hypothesis that the availability of mixed readings correlates to the availability of pseudo-reflexive interpretations. It also emerges from the data that the acceptability of mixed readings with transitive verbs is low, but not absent: as Table 3.2 shows, an average of 29% of participants accepted the mixed interpretation with transitive verbs. Nonetheless, an ambiguity analysis accounts for the data more accurately than an underspecification hypothesis, which would predict mixed readings to be widely accepted with all verbs. Thus, while the ambiguity analysis does not straightforwardly explain the 29% average acceptance in mixed readings of transitive verbs, the underspecification analysis cannot explain the high rejection of mixed scenarios with transitive verbs, nor can it explain the striking difference between the two classes of verbs.

5.2 Questionnaire on Brazilian Portuguese

The questionnaire on BP contained ten target verbs: five transitive verbs and five lexical reflexive verbs. The verbs were selected based on the possibility of expressing or not expressing reflexivity without *se* in finite clauses. The selected target verbs are presented in Table 3.3.

transitive	**lexical reflexive**
admirar 'admire'	*arrumar* 'dress up'
criticar 'criticize'	*depilar* 'depilate, remove body hair'
escolher 'choose'	*maquiar* 'put on makeup'
premiar 'reward'	*pentear* 'comb'
punir 'punish'	*vestir* 'get dressed'

Table 3.3: Target verbs in the BP questionnaire.

Procedure

Each participant was exposed to five target items and ten filler items; no participant was exposed to the same target verb more than once. The target items were divided among four versions of the questionnaire, and each participant was randomly assigned to one of them. Each version contained five target items: they were five verbs from one class (transitive or lexical reflexive) in one scenario (pseudo-reflexive or mixed).[10]

Participants

154 participants took part in the questionnaire. The results below are for 107 participants selected based on 100% accuracy on the fillers.

Results

The results of the questionnaire are displayed in Table 3.4. The table contains the percentage of participants who responded with 'true' to the target items. Pseudo-reflexive interpretations have low acceptance rates with transitive verbs (with an average of 9%), but higher acceptance rates with lexical reflexive verbs (64% on average). Similarly, mixed readings showed a considerably lower acceptance rate with transitive verbs (32% on average) as compared to lexical reflexives (86% on average).

[10]The decision to adopt a between-subject design for the BP questionnaire diverges from the approach taken in the Italian study. This choice was driven by the intention of facilitating the comparison of results with future studies, in case the questionnaire would be extended to additional languages.

verb class	**verb**	**pseudo-refl.**	**mixed**
transitive	*admirar* 'admire'	5 %	28 %
	criticar 'criticize'	10 %	38 %
	escolher 'choose'	14 %	10 %
	premiar 'reward'	0 %	34 %
	punir 'punish'	14 %	48 %
	average	**9%**	**32%**
lexical reflexive	*arrumar* 'dress up'	61 %	82 %
	depilar 'depilate'	91 %	82 %
	maquiar 'put on makeup'	57 %	91 %
	pentear 'comb'	35 %	88 %
	vestir 'get dressed'	78 %	88 %
	average	**64%**	**86%**

Table 3.4: Acceptance rates for BP verbs.

Discussion

The findings support the prediction that mixed readings would be widely accepted with verbs that allow pseudo-reflexive interpretations. Mixed readings with transitive verbs have an average acceptance rate of 32%: this relatively low acceptance does not support a vagueness analysis of *se*-clauses, which would also not predict a remarkable difference in acceptance between transitive and lexical reflexive verbs.

5.3 General discussion of the findings

The two questionnaires presented some differences that prevent a direct comparison: they had a different number of participants, partially different target items, different designs and similar but not identical stimuli. Nonetheless, it is possible to notice that their results show the same general tendencies.

One interesting tendency is that in both questionnaires there is variation within the acceptance rates of verbs of the same class. For example, 'comb' has a lower acceptance rate in pseudo-reflexive scenario as compared to other lexical reflexives. Similarly, 'admire' has a lower acceptance rate than other transitive verbs in the mixed scenario, both in Italian and BP. Some variation is not surprising, given that each verb was associated with a different story.[11]

[11]This variation could have been minimized by using identical stimuli for every verb, such as a standardized template or a visual stimulus. However, I chose to prioritize obtaining spontaneous judgments from speakers using plausible and natural-sounding stories.

Moreover, this variation could indicate that the acceptability in the tested scenarios may vary depending on the properties of the verbs, like stative verbs or verbs that do not result in a change of state. Testing this hypothesis would require further investigation with a broader sample of verbs.

Another general tendency worth discussing is that each verb has a higher acceptance in mixed scenarios as compared to pseudo-reflexive scenarios. This stable pattern does not follow from the theoretical proposal made here (or alternative proposals that I am aware of). This tendency may indicate that while pseudo-reflexive scenarios are generally unaccessible with transitive verbs, speakers may be more tolerant towards mixed readings, due to vague interpretations of reflexive operators in plural environments (like *themselves* in English). This hypothesis could be investigated by checking if comparable acceptance rates would be achieved for plural clauses with transitive verbs and overt reflexive/reciprocal elements; either in the context or Romance *se*-clauses or, more generally, in languages like English. Further research in this direction could shed light on the low (but not absent) acceptance rate of transitive verbs in mixed scenarios.

With respect to the initial predictions, it is possible to observe two trends in the questionnaires:

(i) verbs that were characterized as lexical reflexives generally allow pseudo-reflexive interpretations and mixed readings;

(ii) transitive verbs do not allow pseudo-reflexive readings, and they have low acceptance rates in mixed scenarios.

Both patterns are in line with the proposal that *se*-constructions are ambiguous between reflexivity and reciprocity.

6 Reflexivity and reciprocity: two distinct operators

The empirical picture that emerged above lends support to an analysis of *se*-clauses in Italian and BP where reflexivity and reciprocity are lexically distinct, and where mixed readings are a by-product of pseudo-reflexivity with lexical reflexive verbs. These findings lend support to the analysis presented in Chapter 2, which assumes two distinct covert operators from grammatical arity-reduction: one for reflexivity (141) and one for reciprocity (142).

(141) **RFL**: $\lambda P_{e(st)}.\lambda y_e.\lambda e_s.[P(e,y) \wedge \text{Agent}(e,y)]$

(142) **RCP**: $\lambda P_{e(st)}.\lambda y_e.\lambda e_s.\forall x_1, x_2 \in y\,[x_1 \neq x_2 \rightarrow$
$[\ \exists e' \leq e.\text{Agent}(e', x_1) \wedge \text{P}(e', x_2) \wedge$
$\exists e'' \leq e.\text{Agent}(e'', x_2) \wedge \text{P}(e'', x_1)\ ]]$
(y is a sum of entities; e is an event reducible to unidirectional events)

These operators derive grammatical reflexivity and grammatical reciprocity, whereas *se* is sometimes required to mark these interpretations, but it does not provide reflexive/reciprocal meanings itself. The lexical distinction between reflexive and reciprocal operators is in line with the unified analysis of *se* provided in Chapter 2: this element is analyzed as an identity function, which combines with predicates that already have an agent variable (143).

(143) *se*: $\lambda P_{e(st)}.P$

The denotation of *se* remains the same, regardless of whether it combines with (lexical or grammatical) reflexive or reciprocal predicates. Thus, *se*-clauses are ambiguous between reflexivity and reciprocity, but *se* is not ambiguous itself. The ambiguity arises from whether the interpretation is derived by the reflexive or by the reciprocal operator, but each of them may require *se* in their encoding.[12]

Let us examine this ambiguity more closely. Consider the *se*-clause in (144), with the transitive verb 'punish':

(144) Le ragazze si puniscono. (It)
the girls SE punish.PRS.3PL
i. 'The girls punish themselves.'
ii. 'The girls punish each other.'

The reading in (144i) is derived by the reflexivity operator, whereas the reading in (144ii) is derived by the reciprocity operator.[13] In both cases, *se* acts as a marker of the reflexive/reciprocal interpretation. *Se* is an identity function that combines either with reflexive or reciprocal predicates of type *e(st)*, but the distinct denotations of reflexive and reciprocal operators result in *se*-clauses

[12]For the conditions regulating the (obligatory or optional) appearance of *se*, see Chapter 2.

[13]This section solely focuses on instances where grammatical reflexive and reciprocal operators are covert. For a discussion encompassing overt reflexive and reciprocal elements, see Chapter 2, §5-6. As seen there, no ambiguity arises in the presence of such overt elements.

being ambiguous. The lexical distinction between the two operators is in line with the unavailability of mixed reflexive/reciprocal readings for the sentence in (144).

We have seen that mixed reflexive/reciprocal readings may arise with lexical reflexive verbs, but I have argued that this is a semantic epiphenomenon of their lexical entry. Let us consider the Italian verb *depilare* 'depilate, shave', which was characterized as a lexical reflexive. I propose that the verb has two entries: an intransitive entry with an inherent reflexive reading (145a) and a transitive entry (145b).

(145) a. 'shave' (intransitive): $\lambda y.\lambda e.\text{shave}_1(e) \wedge \text{AgPt}(e, y)$
(AgPt is a complex thematic role, allowing both agent-like and patient-like properties)

b. 'shave' (transitive): $\lambda y.\lambda e.\text{shave}_2(e, y)$

The transitive entry in (145b) may receive a reflexive or a reciprocal interpretation through the dedicated arity-reducing operators. The intransitive entry in (145a), by contrast, expresses reflexivity through the inherent meaning of the verb. The inherent reflexive interpretation of such intransitive verbs is what I defined *pseudo-reflexivity*: an entity y may be considered as an Agent-Patient of a 'depilate' event if y is the (volitional) patient of the event, without being the agent of the 'depilate' event as described by the transitive entry.

Based on these two entries, the *se*-clause with the verb 'depilate' in (146) is three-way ambiguous: it has a grammatical reflexive reading (146i), a grammatical reciprocal reading (146ii) and a lexical reflexive reading (146iii).

(146) Le ragazze si depilano. (It)
the girls SE depilate.PRS.3PL
i. 'The girls shave themselves.'
ii. 'The girls shave each other.'
iii. 'The girls shave.'

The grammatical reflexive and reciprocal interpretations in (146i)-(146ii) are derived from the transitive entry of the verb (145b), just like the parallel readings with the verb 'punish' illustrated for (144). By contrast, the interpretation in (146iii) is due to the intransitive entry of the verb. Note that in this latter case, *se* has the same denotation presented above. However, the lexical reciprocal entry

does not require *se* to mark the reciprocal interpretation; here, the obligatory presence of *se* relies on syntactic constraints that change per language.[14]

In the grammatical reflexive entry, two thematic roles are identified by the reflexive operator. By contrast, the lexical reflexive entry has one argument with a complex thematic role that allows for agent-like and patient-like properties in the event denoted by the verb. In the case of the intransitive entry 'shave' in (146iii), some of the agent-like properties (e.g., sentience and volitional involvement) are retained by the subject, whereas other agent-like properties (e.g., the physical carrying out of the action) are not necessarily retained. The pseudo-reflexive reading is in line with an interpretation where each of the girls in the subject of (146) was shaved by someone (possibly other than herself) on her own accord. This can subsume a scenario that encompasses situations where some girls shaved themselves, while some shaved each other. In such cases, the mixed readings investigated in this chapter are accessible as a result of the pseudo-reflexive reading, not of an ambiguity between the grammatical operations of reflexivity and reciprocity.

7 Concluding remarks

The driving question behind this chapter concerned the nature of the polysemy between reflexivity and reciprocity in Romance *se*-constructions. Taking Italian and BP as case studies, I empirically substantiated a treatment of *se*-clauses as ambiguous. I have shown that *se*-constructions do not generally support mixed interpretations (i.e., partially reflexive and partially reciprocal), unlike what has been claimed in the literature for other languages that also employ one construction for both meanings (Murray, 2008; Cable, 2012).

I have argued that lexical reflexivity plays a crucial role with respect to the availability of mixed interpretations: in Italian and BP, mixed interpretations are generally excluded with transitive verbs, but allowed with lexical reflexive verbs. I have identified Italian and BP verbs with a lexical reflexive entry, and I have shown that they have the same interpretation of similar intransitives in other languages. The inherent reading of lexical reflexives is in line with interpretations labeled here *pseudo-reflexive*, where there is loose identity between two thematic roles. This reading supports scenarios where the subject is the patient of

[14] As seen earlier in §4, the (146iii) reading is be accessible without *se* in BP finite clauses, or analytic causatives across various Romance languages.

the action denoted by the verb, whereas the agent carrying out the action is underspecified, as long as the subject is volitionally involved in the event.

I proposed that the availability of mixed readings in Romance *se*-clauses with lexical reflexives is a semantic epiphenomenon of the meaning denoted by the intransitive verb entry. I have also shown that pseudo-reflexive readings are in line with an array of interpretations that may encompass so-called 'mixed' readings across unrelated languages with no morphological identity between reflexivity and reciprocity.

Upon setting aside the case of lexical reflexivity, the emerging empirical picture has revealed that mixed readings are not vastly accepted with transitive verbs, challenging an analysis of *se*-clauses in terms of underspecification. Based on this, I argued that *se*-clauses are ambiguous between reflexivity and reciprocity, but that *se* itself is not lexically ambiguous. The data are in line with the unified analysis of *se* provided in Chapter 2, in which this element licenses dedicated operators that derive grammatical reflexive and reciprocal interpretations.

If we compare the outcomes of this chapter with proposals in the existing literature, we find two different patterns to account for the relation between reflexivity and reciprocity in languages that do not morphologically distinguish between the two. On the one hand, we have languages with underspecified reflexive/reciprocal constructions, like Cheyenne (Murray, 2008) or Nyulnyulan languages (McGregor, 2000); on the other hand, we have languages like Italian and BP, which distinguish between two (covert) strategies. This leaves open a question of cross-linguistic nature, on whether the relation between reflexivity and reciprocity is subject to variation across languages.

The empirical evidence in this chapter is limited to Italian and BP. Nevertheless, we have observed that pseudo-reflexive readings are available with lexical reflexive verbs across other languages, and they can influence the availability of mixed readings. Therefore, it is crucial for further research on the topic to consider lexical reflexivity and its effects on tests aimed at distinguishing between ambiguity or underspecification of reflexive/reciprocal constructions.

CHAPTER 4

Lexical reciprocity in Bantu: the case of Swahili

1 Introduction

In Bantu languages, reciprocity is commonly expressed by verbal extensions, often by the morpheme -*an* or variations of it (Schadeberg, 2003). In Swahili, reciprocity is associated with the suffix -*an*: the sentences in (147) and (148) below describe mutual configurations between the entities of the subject set 'Mary and Laura'.[1]

(147) Mary na Laura wa-na-saidi-an-a.
Mary and Laura SM.3PL-PRS-help-RECP-FV
'Mary and Laura help each other.'

(148) Mary na Laura wa-na-pig-an-a.
Mary and Laura SM.3PL-PRS-hit-RECP-FV
'Mary and Laura hit each other/ fight.'

Swahili does not make an overt distinction between grammatical and lexical reciprocity: the affix -*an* constitutes the only way to express reciprocity through verbal morphology. This morpheme is employed with ordinary transitive verbs

[1] Unless otherwise indicated, the examples presented in this chapter are from Swahili.

whose meanings do not fit into Kemmer's (1993) definition of 'naturally' reciprocal events, such as 'help' in (147), but also with verbal meanings that are commonly associated with lexical reciprocity in different languages, like 'fight' in (148).

Kemmer (1993) took a Bantu language, Changana, as the prototype for a class of languages where the same verbal marker is employed to productively derive reciprocity from transitive verbs (e.g., in *ku von-an-a* 'to see each other'), but also to mark verbs denoting 'naturally reciprocal events' (e.g., *ku twan-an-a* 'to agree'). Further, extensive typological research on the Bantu middle voice has revealed a wide range of interpretations associated with the affix *-an*, which encompasses (but is not restricted to) reciprocity, including 'naturally reciprocal' events (Bostoen et al., 2015; Dom et al., 2016b). These observations rely on verbal meanings: verbs considered 'naturally reciprocal' are those that have an interpretation fitting into Kemmer's (1993) notion of 'naturally reciprocal' events. However, this categorization lacks support from independent evidence; in the literature, it is not explicitly discussed whether there are semantic or morphosyntactic properties that would characterize lexical reciprocals in Swahili.

The existence of a single reciprocal form in Swahili, without a distinction between lexical and grammatical processes, is reminiscent of the situation observed for Romance languages in Chapter 2. However, the empirical picture that emerges in Swahili cannot be exhaustively captured by the generalizations provided throughout the previous chapters. Some of the properties that we have examined for the characterization of Romance reciprocal intransitive verbs are not straightforwardly applicable in Swahili, and cannot be used as diagnostics for lexical reciprocity in this language. For example, we considered the reciprocal 'with'-alternation as a property of lexical reciprocals in Romance, as well as in other languages such as English or Greek. However, this alternation is productive in several Bantu languages, including Swahili (Seidl and Dimitriadis, 2003; Maslova, 2007; Baker et al., 2013; Mwamzandi, 2014; Bostoen et al., 2015). Any Swahili verb that is combined with the morpheme *-an* can express reciprocity with a conjoined subject (as we saw in (147)-(148) above), or in a reciprocal 'with'-construction, as exemplified in (149) below for the verb *saidiana* 'help each other':

(149) Mary a-na-saidi-an-a na Laura.
Mary SM.3SG-PRS-help-RECP-FV with Laura
'Mary and Laura help each other.'
(lit. 'Mary helps each other with Laura')

These observations make Swahili an interesting case study. The lack of a morphological distinction between lexical and grammatical reciprocity raises the question of whether both strategies are operational in this language, and how they can be characterized. The fact that the reciprocal 'with'-alternation is productive in Swahili, unlike other well-studied languages, adds another complication to the comparative characterization of the distinction between lexical and grammatical reciprocal processes.

Relying on different properties, in this chapter I will substantiate a distinction between two reciprocal strategies in Swahili, and I will argue that it is parallel to the distinction between lexical and grammatical reciprocity found in other languages. I will show that Swahili lexical reciprocals, unlike reciprocals that are the outcome of a productive grammatical operation, allow singular subjects, can undergo causativization and do not allow the separation of *-an* from the rest of the verb stem. Moreover, they belong in Kemmer's (1993) class of 'naturally reciprocal' events and exhibit readings that I defined as *pseudo-reciprocal*. I propose that these data lend support to an analysis where *-an* is a valence-reducing morpheme in grammatical reciprocals, whereas lexical reciprocals are intransitive predicates where *-an* is lexicalized as part of the verb entry.

This chapter is structured as follows. In §2, I provide a brief overview of Swahili verbal morphology, introducing the components that are relevant for this chapter. In §3, I review previous studies on reciprocity in Bantu, and I discuss two relevant patterns for the expression of reciprocal configurations. In §4, I provide an overview of the properties of Swahili reciprocal constructions. In §5, I present empirical evidence in favor of a distinction between lexical and grammatical reciprocity, relying on pseudo-reciprocal interpretations (§5.1), acceptability with singular arguments (§5.2) and constraints on the combination with other verbal extensions (§5.3). Based on these data, in §6 I argue in favor of a twofold treatment of Swahili *-an*: as a valence-reducing reciprocal morpheme with grammatical reciprocals, and as a lexicalized marker with lexical reciprocal verbs. In §7, I highlight some open questions and provide concluding remarks.

The data presented in this chapter, unless otherwise specified, have been collected through a series of interviews (conducted in English) with four native speakers of Swahili. All four informants originate from Tanzania and were residing in Europe at the time of the interviews.

2 A (non-exhaustive) overview of Swahili verbal morphology

Before delving into the main question of this chapter, let me provide a brief overview of Swahili verbal structure. This overview will be simplified, and it does not by any means aim to be exhaustive or comprehensive; it will solely focus on components that are relevant for this chapter, to facilitate the reading of the examples throughout it. If you are already familiar with the basic components of Swahili verbal structure, please feel free to skip to the next section.

Swahili is an agglutinative language; verbs are composed of different slots, summarized in Figure 4.1 below.

negation	subject marker	TAM	object marker	stem	verbal extensions (APPL, CAUS, RECP...)	final vowel

Figure 4.1: Simplified illustration of slots in Swahili verbs

Let us first consider non-negative environments. In the initial position of verbs we always find subject markers: they are obligatory and they agree with the subject in number and noun class. Subject markers for nouns of class 1/2 also have dedicated forms for first, second and third person singular and plural.[2] In example (150) below, *wa-* is the subject marker of the third person plural. Object markers agree with the direct object. In (150), the object marker *-m-*, stands for third person singular. Object markers are obligatory if the direct object is animate.[3] In the slot between subject and object markers, there are

[2]There are 18 noun classes in Swahili (Hinnebusch and Mirza, 2000; Muaka, 2023). Noun classes are not directly relevant for this chapter, because the vast majority of examples I will present contain human entities, with subject agreement from classes 1/2. Therefore, I will not gloss nouns and subject/object with the noun classes to which they belong, unless pertinent to specific examples.

[3]With inanimate objects, object markers are used to express definiteness (Keach, 1995; Creissels, 2005).

markers of tense, aspect and mood (TAM): in (150) the morpheme *-li-* indicates past tense.

(150) Watoto wa-li-m-pend-a mwalimu wao.
children SM.3PL-PST-OM.3SG-love-FV teacher their
'The children loved their teacher.'

Negation may be expressed with dedicated subject markers, and it may also affect TAM markers. In the sentence in (151) below, the subject marker for third person plural is *hawa-*, whereas the past tense is expressed by the marker *ku-* (unlike the forms *wa-* and *li-* used in the non-negative environment in (150) above.)

(151) Hawa-ku-m-pend-i mwalimu wao.
NEG.SM.3PL-PST-love-FV teacher their
'They did not love their teacher.'

The morphemes introduced so far occupy slots that precede the verb stem. In post-verbal position, we can find *verbal extensions*. I will review three of them for the sake of this chapter: applicative, causative and reciprocal.

The applicative morpheme *-i* increases the number of arguments of the verb by one (Jerro, 2016), and it introduces an argument that may have different thematic roles.[4] The argument introduced by the applicative morpheme is referred to as *applied argument*. In (152) the applicative *-i* introduces the applied object 'child', that is the beneficiary of the action denoted by the verb.

(152) Juma a-li-m-nunul-i-a mtoto kitabu.
Juma SM.1SG-PST-OM.3SG-buy-APPL-FV child book
'Juma bought the child a book.'
(Ngonyani, 1995, p.11)

The causative morpheme *-ish* increases the valency of the verb, adding an argument that is interpreted as causer of the event (or state) denoted by the verb. The causative morpheme can be added to intransitive verbs (153) or to transitive verbs (154). With intransitive predicates, the subject of the original

[4]Independently of the valence-increasing operation, Bantu applicative morphemes can have other functions, such as focus (Port, 1981), 'concept strengthening' (Marten, 2003) or scope extension of the locative phrase (Rugemalira, 2004; Pacchiarotti, 2016). These functions are not directly relevant for this chapter, so I redirect the reader to aforementioned studies for an overview and discussion of these cases.

verb, for instance 'sleep' in (153a), becomes the direct object of the derived verb, and the causer is encoded as the subject, as in (153b). With transitive verbs, such as 'drink' in (154a), the direct object becomes a nominal complement of the derived verb, as in (154b).[5]

(153) a. Watoto wa-na-lal-a.
children SM.3PL-PRS-sleep-FV
'The children are sleeping.'

b. Juma a-na-wa-lal-ish-a watoto.
Juma SM.3SG-PRS-OM.3PL-sleep-CAUS-FV children
'Juma puts the children to bed.'
(lit. 'Juma makes the children sleep')
(Krifka 2005, p.1402, my glosses)

(154) a. Farasi a-na-kunyw-a maji.
horse SM.3SG-PRS-drink-FV water
'The horse is drinking water.'

b. Juma a-na-m-nyw-esh-a farasi maji.
Juma SM.3SG-PRS-OM.3SG-drink-CAUS-FV horse water
'Juma makes the horse drink water.'
(Krifka 2005, p.1402, my glosses)

The reciprocal morpheme *-an* will be discussed in more detail throughout this chapter. For now, let us simply note that it decreases the valency of the verb, and it denotes a configuration where the entities in the denotation of the subject are both agents and patients of the action described by the verb (155).

(155) Nala na Laura wa-na-saidi-an-a.
Nala and Laura SM.3PL-PRS-help-RECP-FV
'Nala and Laura help each other.'

Note that the three verbal extensions that we just examined are realized in the same slot. As seen in Figure 4.1 above, there is not a dedicated slot for each of them. Some of these verbal extensions can combine with one another; the order of these affixes will be examined more thoroughly in §5.3, where it will be central for our discussion.

The last slot of the verb is occupied by the final vowel: it is *-a* in the indicative form (156a), *-i* in negative environments (156b), and *-e* in the subjunctive

[5]The prefix *ku-* sometimes accompanies monosyllabic verbs, such as *nywa* 'drink' in (154a).

form (156b). Final vowels are not directly relevant for the topic of this chapter, therefore I will systematically gloss them as FV, without further distinction.

(156) a. Wanaume wa-li-pik-a chakula cha jioni.
men SM.3PL-PST-cook-FV meal of evening
'The men cooked dinner.'

b. Si-tak-i tu-kut-an-e saa tisa mchana.
NEG.1SG-want-FV SM.1PL-meet-RECP-FV hour nine afternoon
'I do not want us to meet at 3pm.'

3 Previous studies

The Proto-Bantu affix *-*an* has been reconstructed as a morpheme associated to sociativity and reciprocity (Meeussen 1967; Schadeberg 2003; Schadeberg and Bostoen 2019 and references therein). Across Bantu languages, the suffix -*an* (and morphophonological variations of it) is a common means for expressing reciprocity, and there are different patterns of distribution of -*an* in relation to lexicalized reciprocal interpretations. Let me highlight here two such patterns that are relevant for the central questions of this chapter.

First, let us look at Bantu languages from the Kikongo Language Cluster that have two reciprocal markers. One marker is a complex form ending in -*an*, which may differ across languages of this group (e.g. -*asan*, -*afan* or -*azyan*, among others), the other is a simplex form, consistently realized as -*an* (Dom et al., 2016a). With a quantitative study, Dom et al. (2016a) revealed that complex forms tend to be associated with grammatical reciprocity, whereas the simplex form is often lexicalized as a middle marker. As illustrated in the example from Otjiherero in (157) below, the complex form -*asan* leads to a reciprocal interpretation when applied to the transitive verb stem 'kill'. By contrast, the simplex form -*an* cannot freely combine with just any transitive verb, but is often restricted to predicates with middle-related interpretations, including lexical reciprocals. An example from Kimbeko is provided in (158) below: here, the reciprocal interpretation ('meet') does not retain the meaning of the transitive verb ('see'). As discussed in Chapter 2, such cases of semantic drift are taken as indications of a lexical reciprocal entry: reciprocity cannot be the outcome of a productive operation on the transitive entry.

(157) *zep* 'kill' > *zep-asan-a* 'kill each other' (Otjiherero)
(Dom et al., 2016a, p.2)

(158) Ba-ana ba-kéntu ba-boli si ba-mon-an-a kuna n-zo
[2]-child [2]-woman [2]-two FUT SM[2]-see-RECP-FV LOC [9]-house
n-kanda. (Kimbeko)
[3]-book
'The two girls will meet each other at school.'
(Dom et al., 2016a, p.4)

While the distinction between simplex and complex reciprocal forms in languages of the Kikongo cluster does not specifically boil down to a difference between lexical and grammatical reciprocity, at least some lexical reciprocals can be overtly identified because they bear the simplex *-an* marker rather than the productive complex form. It is worth noting that further research is needed to explore the distribution and the array of interpretations associated to the different morphological forms within languages of the Kikongo cluster. In Appendix B, I provide some preliminary findings on the distribution of simplex/complex forms in Kituba; the overview supports the generalization that the distinction between simplex and complex forms does not unequivocally reflect a difference between lexical and grammatical reciprocal processes.

Secondly, a relevant pattern concerns Bantu languages where reciprocity is expressed with reflexive markers, but some verbs denoting 'naturally reciprocal' events bear the (non productive) marker *-an*. In Bantu languages, reflexivity is generally expressed by morphemes derived from the Proto-Bantu *í- (Bostoen, to appear), but some Bantu languages are characterized by a reflexivity/reciprocity polysemy (Heine, 2000). Bostoen (to appear) noted that in some South-West Bantu languages, reflexive morphemes are also employed for expressing reciprocity. Let us report an example from Mashi. The prefix *cí-* leads to reflexive interpretations with the verb *hupwera* 'sacrifice' in (159). However, when applied to a predicate with a plural argument, the same prefix can be used to describe a reciprocal configuration (160). Note that *cí-* is also in association with verbs denoting 'naturally reciprocal' events, such as *cí-handa* 'divorce' or *cí-pitura* 'look alike' (Bostoen, to appear, p.7).

(159) *hupwera* 'sacrifice' > *cí-hupwera* 'sacrifice oneself' (Mashi)
(Bostoen, to appear, p.5)

(160) Ka-tú-cí-mon-ine rero. (Mashi)
NEG.SM.1PL-REFL-see-COMPL today
'We have not seen each other today.'
(Bostoen, to appear, p.4)

Crucially, the morpheme *-an* is not productive for the expression of reciprocity in Mashi. Yet, it can be found in lexicalized verbal forms with middle-related meanings, including verbs denoting 'naturally reciprocal' event. The example in (161) below shows that the verb *hangana* 'meet' does not have a corresponding transitive form.

(161) *hang-an-a* 'meet' < **hanga* (Mashi)
(Bostoen, to appear, p.9)

Thus, although in South-West Bantu languages like Mashi there is no dedicated morphological marker for lexical reciprocity, some verbs of this class are distinguishable from the productive reciprocal strategy, since they bear the lexicalized marker *-an*.

In this chapter, I argue that instances of reciprocal verbs where the morpheme *-an* is lexicalized can be also found in Swahili, although in this language they have the same surface form as grammatical reciprocal predicates. Verbs with a lexicalized *-an* fall into the definition of lexical reciprocals adopted in the previous chapters: they are not the outcome of a productive reciprocal operation, but they have an inherent reciprocal meaning. I will present an empirical characterization of lexical reciprocals showing that they share some properties with similar intransitives in English and other languages.

4 Reciprocity in Swahili

Swahili represents a different pattern from the Bantu languages reviewed above: it exhibits only one reciprocal morpheme, and it is distinct from the reflexive strategy. The Swahili reflexive morpheme *ji-* is in pre-verbal position and it occupies the slot of the object marker (162). By contrast, as seen above, the reciprocal morpheme *-an* is found in post-verbal position, in the slot dedicated to verbal extensions (163).[6]

[6]The different slots occupied by reflexive and reciprocal morphemes in Bantu were proposed to reflect a syntactic difference between reflexive and reciprocal constructions. Dalrymple et al.

(162) Laura a-na-ji-pend-a.
Laura SM.3SG-PRS-REFL-love-FV
'Laura loves herself.'

(163) Laura na Nala wa-na-pend-an-a.
Laura and Nala SM.3PL-PRS-love-RECP-FV
'Laura and Nala love each other.'

The affix *-an* is the primary strategy to express reciprocity in Swahili, and it is the only strategy to express reciprocity through verbal extensions.[7] On top of this, Swahili differs from languages like English, Greek or Hebrew (where lexical reciprocity is realized with (zero) verbal morphology and grammatical reciprocity involves reciprocal pronouns), in another respect: some properties that in these languages are considered a prerogative of lexical reciprocals, in Swahili are found in all verbs bearing the suffix *-an*.

One case is the reciprocal 'with'-construction: any Swahili verb bearing the affix *-an* can encode the participants of the reciprocal configuration either as a plural subject, or split between the syntactic subject and an argument introduced by the preposition *na* 'with'. Dimitriadis (2008a) proposed that the reciprocal 'with'-construction is cross-linguistically associated with the 'single-event' interpretation typical of lexical reciprocals, but noticed that this generalization cannot be extended to Swahili. In fact, the 'with'-construction in (164) below refers to multiple unidirectional events spread over time: the

(1994) argued that Chichewa reflexive constructions are syntactically transitive (because the reflexive morpheme is considered an incorporated pronoun), whereas reciprocal constructions are syntactically intransitive (because the reciprocal morpheme is argued to demote the object position). This distinction is supported with data from object comparison readings and nominalizations, and it is comprehensively discussed in Mchombo (1993) and Dalrymple et al. (1994).

[7]Another reciprocal strategy involves the use of a possessive form of the noun *mwenze* 'fellow, comrade', often associated with universal quantifiers, as in (i).

(i) Kila mmoja a-li-m-saidi-a mwenz-ake.
each one SM.3SG-PST-OM.3SG-help-FV fellow-POSS.3SG
'They helped each other.' (lit. 'Each one helped their fellow.')

Nouns with meanings comparable to Swahili *mwenze* are found across several languages for the expression of reciprocal configurations (Heine and Miyashita, 2008; Narrog and Heine, 2011). I speculate that this 'comrade reciprocal' in Swahili univocally expresses grammatical reciprocity. However, this strategy is under-investigated, and further studies are necessary to support this classification.

Kikuyu visiting the Swahili, and the Swahili visiting the Kikuyu.

(164) Wakikuyu wa-li-kuwa wa-ki-tembele-an-a na
Kikuyu SM.3PL-PST-AUX SM.3PL-PROG-visit-RECP-FV with
Waswahili ku-fanya biashara.
Swahili INF-do trade
'The Kikuyu and the Swahili used to visit each other to trade.'
(Mwamzandi, 2014, p.145)

Another productive property of Swahili reciprocals are nominalizations. Virtually all verbs with the morpheme *-an* can be nominalized by the infinitival prefix *ku-*: this process is illustrated in (165) with the verb *penda* 'love'. Moreover, it is not uncommon to find nouns of different nominal classes bearing the reciprocal morpheme *-an*. One example is provided by *upendano* 'mutual love' in (166), which does not bear th prefix *ku-*, but the marker of noun class 14 *u-*.

(165) Ku-pend-an-a ni muhimu.
INF-love-RECP COP important
'Loving each other is important.'

(166) A-na-tak-a [...] u-pendano [...].
SM.3SG-PRS-want-FV [14]love.RECP
'He wants [...] mutual love [...].'
(Helsinki Corpus of Swahili, adapted)

Other instances of reciprocal nouns are *ufuatanisho* 'going after each other' (from the verb *fuata* 'follow') and *uchinjanaji* 'mutual killing' (from *chinja* 'kill'). Essentially, any reciprocal verb can be nominalized with the prefix *ku-*, and some of them also have corresponding nominals (with nominal class markers) with a reciprocal meaning, such as *upendano* 'mutual love'. This constitutes an additional contrast with some Semitic or Romance languages, where nominalizations have been considered as a prerogative of lexical reciprocals (Reinhart and Siloni, 2005; Doron and Rappaport Hovav, 2009), as seen in Chapter 2, §4.1. Therefore, we cannot rely on reciprocal 'with'-constructions nor on nominalizations as diagnostics for the characterization of lexical reciprocals in Swahili.[8]

[8]Alternatively, relying on these properties for the characterization of lexical reciprocals would suggest that all Swahili verbs bearing the affix *-an* have a lexical reciprocal entry. Such an option is theoretically odd, as it would imply that all Swahili reciprocals are stored in the lexicon, and that *-an* affixation is never a productive, grammatical operation in Swahili.

The existence of verbs with a lexical reciprocal meaning has been postulated in the literature for Bantu languages with only one *-an* form, such as Changana (Kemmer, 1993), or Swahili (Seidl and Dimitriadis, 2003). This assumption relied on the fact that such verbs have meanings falling into Kemmer's class of 'naturally reciprocal' events, and it was empirically supported with instances of semantic drift and deponent entries. For example, the Swahili verbs listed in (167) underwent semantic drift: they are reciprocal verbs whose meaning does not preserve the interpretation of the transitive stem. The predicates in (168) are deponent entries: they are reciprocal verbs without a corresponding transitive form.

(167) a. *piga* 'hit' > *pigana* 'fight'
b. *shinda* 'defeat' > *shindana* 'compete'
c. *gawa* 'distribute' > *gawana* 'share'

(168) a. **fana* > *fanana* 'resemble each other'
b. **hanga* > *hangana* 'fight'
c. **jibiza* > *jibizana* 'discuss'

No independent evidence from the literature supports the claim that verbs such as those in (167)-(168) have properties that distinguish them from reciprocal verbs that result from a productive reciprocal operation. Moreover, semantic drift and deponent entries are not necessary properties of lexical reciprocals across languages. Therefore, to support a more exhaustive classification of lexical reciprocity for Swahili, in the next section I will study other properties that characterize this class of verbs.

5 Properties of Swahili lexical reciprocals

This section proposes a distinction between lexical and grammatical reciprocity in Swahili. These two strategies have the same surface form (a verb with the *-an* marker), but I argue they are the result of two different processes. Grammatical reciprocals are productively composed by the application of the reciprocal morpheme *-an* onto a non-reciprocal verbal base. By contrast, lexical reciprocal verbs are intransitive verbs where *-an* is lexicalized as part of the stem. I will support the proposal that the verbs in (169) have a lexical reciprocal entry.

(169) **Swahili lexical reciprocals**: *achana* 'break up, divorce'; *gawana* 'share'; *gombana* 'quarrel'; *gongana* 'collide'; *jibizana* 'discuss'; *pambana* 'struggle'; *patana* 'agree'; *pigana* 'fight'; *shindana* 'compete'; *tengana* 'separate, break up'.

The distinction will rely on data showing that lexical reciprocal predicates lead to pseudo-reciprocal interpretations (§5.1), may be licensed in singular constructions where grammatical reciprocity is disallowed (§5.2), do not allow applicative morphemes between *-an* and the transitive verb stem (§5.3.1), and can generally be causativized by the verbal extension *-ish* (§5.3.2).

5.1 Pseudo-reciprocal interpretation

As seen in the previous chapters, lexical and grammatical reciprocals lead to different interpretations. In Chapter 2, I defined the interpretation of grammatical reciprocals using an operator of *plain reciprocity*, that applies to a transitive predicate and describes a transitive relation that holds in different directions. By contrast, I referred to the reading associated with lexical reciprocals as *pseudo-reciprocal*: these verbs denote a collective event that cannot be 'decomposed' into unidirectional relations of a transitive alternate.

To empirically substantiate the proposal that lexical reciprocal predicates denote a single collective event, Siloni (2002) and Dimitriadis (2008b) used modification through the adverbial 'five times' as a test. An example from English is provided below. The grammatical reciprocal form in (170) may either be in line with a scenario where Mary and Lisa described each other for five times in total (170i), or with a scenario in which Mary described Lisa five times, and Lisa described Mary five times, resulting in ten descriptions in total (170ii).[9] By contrast, lexical reciprocals can only truthfully refer to five events in total: (171) below only supports a scenario with five collective kisses in total.

(170) Mary and Lisa described each other five times.
i. five descriptions in total
ii. ten descriptions in total

[9] As already motivated in Chapter 2 (§4.3), I will not delve here into the interpretation of grammatical reciprocity, and the possible different interpretations resulting in five or ten cumulative events.

(171) Mary and Lisa kissed five times.
i. five kisses in total
ii. #ten kisses in total

Note that I do not subscribe to the view in Siloni (2002) and Dimitriadis (2008b) that lexical reciprocals are necessarily symmetric (i.e. involving corresponding sub-relations from all participants), but I rather define pseudo-reciprocity in terms of the entailment relations (or absence thereof) discussed in Chapter 2, §4.3. However, I align with the view that the events denoted by the lexical reciprocal entry are not the sum of unidirectional relations described by the corresponding transitive entry. The 'five times' adverbial modification test proves itself useful in this respect.[10]

In Swahili, if an ordinary transitive verb like *tembelea* 'visit' is used in a reciprocal form and modified by the adverbial *mara tatu* 'three times', it leads to the same arrays of interpretations of the English grammatical reciprocal in (170). The sentence in (172) below is in line with three visits in total (172i), or with three visits from Nala to Juma and three visits from Juma to Nala, resulting in six visits in total (172ii).

(172) Nala na Juma wa-li-tembele-an-a mara tatu.
Nala and Juma SM.3PL-PST-visit-RECP-FV three times
'Nala and Juma visited each other three times.'
i. three visits in total
ii. six visits in total

By contrast, reciprocal verbs that do not have a binary entry unequivocally lead to a total of three events when modified by the adverbial 'three times', just like lexical reciprocal forms in English. The deponent verb *jibizana* 'discuss' in (173) does not have a transitive entry to derive grammatical reciprocity. When modified by *mara tatu* 'three time', this verb is only in line with a scenario encompassing three discussions in total between Nala and Juma:

[10] A specific advantage of this test is that it allows linking the intuitions of native speakers to a truth-value in the context of data elicitation. For example, speakers were asked to evaluate the acceptability of a reciprocal construction with *mara tatu*, like (172), in the relevant scenarios (e.g. a scenario involving a total of three visits between Nala and Juma, and a scenario involving six visits). Also, note that for the sake of streamlining the elicitation task, I employed the adverbial 'three times' instead of 'five times', but this choice does not affect the argument made here.

(173) Nala na Juma wa-li-jibiz-an-a mara tatu.
Nala and Juma SM.3PL-PST-discuss-RECP-FV three times
'Nala and Juma discussed three times.'
i. three discussions in total
ii. #six discussions in total

The 'three times' test also applies to verbs that have a transitive entry as well as an intransitive entry with a collective meaning. In such cases, the use of 'three times' only permits an interpretation with a total of six events in relation to the reciprocated reading of the transitive meaning. Let us take as an example the case of *pigana* 'hit each other/fight' in (174). Its transitive entry *piga* can receive a grammatical reciprocal interpretation ('hit each other') which is plain reciprocal: if Nala and Juma hit each other, it follows that Nala hit Juma and Juma hit Nala. When modified by the adverbial *mara tatu* 'three times', this interpretation can refer to three hitting events in total (174i) or to six hitting events in total (174ii). By contrast, the intransitive meaning has a pseudo-reciprocal interpretation: a (collective) fight does not entail unidirectional relations of the events denoted by the transitive entry (e.g., Nala hitting Juma or Juma hitting Nala). Upon modification with 'mara tatu', this interpretation is only in line with a total of three events (174).

(174) Nala na Juma wa-li-pig-an-a mara tatu.
Nala and Juma SM.3PL-PST-hit-RECP-FV three times
'Nala and Juma hit each other/fought three times'
i. three hitting events in total/ three fights in total
ii. six hitting events in total/ #six fights in total

I draw two main conclusions from the data presented in this section. First, ordinary transitive predicates reciprocalized by *-an* receive the same plain reciprocal reading as grammatical reciprocals in English, and lead to the same interpretations in the 'three/five times' test. However, there are Swahili verbs that receive a pseudo-reciprocal interpretation, and only lead to a total of three collective events upon modification by 'three times'; I propose that such predicates have a lexical reciprocal entry. Secondly, we have seen that if a reciprocal verb shows a semantic drift from its transitive meaning, then upon modification with the adverbial 'three times', the *-an* form can receive a plain reciprocal interpretation (with three or six events in total), and a pseudo-reciprocal interpretation (with three events in total). I argue that such entries

are ambiguous between a grammatical and a lexical reciprocal entry.

5.2 Singular predication

Across languages, plural morphology is often necessary for reciprocal constructions (e.g., with *each other* in English). In Swahili, however, reciprocal verbs require either a plural subject or a (possibly singular) subject followed by a *with*-phrase.

Mwamzandi (2014) observed that verbs with the suffix *-an* can take as subject a conjoined NP (175a), a plural NP (175b), or a plural subject marker (175c).

(175) a. Nala na Halima wa-na-pend-an-a.
Nala and Halima SM.3PL-PRS-love-RECP-FV
'Nala and Halima love each other.'

b. Watoto wa-na-pend-an-a.
children SM.3PL-PRS-love-RECP-FV
'The children love each other.'

c. Wa-na-pend-an-a.
SM.3PL-PRS-love-RECP-FV
'They love each other.'

If the subject is morphologically singular, verbs with the suffix *-an* require a participant introduced by a post-verbal 'with'-phrase, as in (176) below. In the absence of a 'with'-phrase, singular subject markers do not tolerate *-an* (177).

(176) Nala a-na-pend-an-a na Halima.
Nala SM.3SG-PRS-love-RECP-FV with Halima
'Nala and Halima love each other.'

(177) * Nala a-na-pend-an-a.
Nala SM.3SG-PRS-love-RECP-FV

In this section, I demonstrate that while these requirements consistently hold for grammatical reciprocals, verbs with a lexical reciprocal entry may appear without a plural subject marker and without 'with'-phrases. We will see that lexical reciprocals are licensed in two environments where plurality is not morphosyntactically expressed, and where grammatical reciprocity is ruled out: we will review instances of modal embedding (§5.2.1) and of finite clauses with the habitual TAM marker *hu-* (§5.2.2).

5.2.1 Modal embedding

I mentioned above that Swahili predicates cannot be reciprocalized by *-an* while bearing a singular subject, unless accompanied by a 'with'-phrase. This observation also holds for reciprocal verbs embedded under the modal 'want'.

Let us consider the verbs *pendana* 'love each other' in (178) and *tembeleana* 'visit each other' in (179). In both cases, the reciprocal verbs lead to ungrammaticality with singular subject markers (178a)-(179a). This configuration is only possible with a 'with'-phrase that introduces a participant of the reciprocal relation, as in (178b)-(179b).

(178) a. * Si-tak-i ni-pend-an-e.
NEG.SM.1SG-want-FV SM.1SG-love-RECP-FV

b. Si-tak-i ni-pend-an-e na wewe.
NEG.SM.1SG-want-FV SM.1SG-love-RECP-FV with you
'I don't want us to love each other.'
(lit. 'I don't want I love-RECP with you.')

(179) a. * Si-tak-i ni-tembele-an-e.
NEG.SM.1SG-want-FV SM.1SG-visit-RECP-FV

b. Si-tak-i ni-tembele-an-e na wewe.
NEG.SM.1SG-want-FV SM.1SG-visit-RECP-FV with you
'I don't want us to visit each other.'
(lit. 'I don't want I visit-RECP with you.')

However, there is handful of reciprocal predicates that can be embedded and bear singular subject agreement. With these verbs, a post-verbal *with*-phrase is not required for the grammaticality of the sentence. The examples below show are illustrative for *pigana* 'fight' (180) and *shindana* 'compete' (181):

(180) Si-tak-i ni-pig-an-e.
NEG.SM.1SG-want-FV SM.1SG-hit-RECP-FV
'I don't want to fight.'

(181) Si-tak-i ni-shind-an-e.
NEG.SM.1SG-want-FV SM.1SG-defeat-RECP-FV
'I don't want to compete.'

Note that such constructions receive an interpretation that does not preserve the meaning of the transitive stem. For example, (180) above denotes the speaker's unwillingness to fight, rather than to be involved with mutual hitting.[11]

The examples in (178) and (179) above illustrate that the productive reciprocal operation cannot appear with a singular subject, in line with the generalization that Swahili *-an* requires plurality (Mwamzandi, 2014). Therefore, I take cases like (180)-(181) as an indication that the embedded verb is not a predicate that underwent reciprocalization through the affix *-an*. Instead,

[11] An interesting yet unrelated fact is that one of my informants accepts any reciprocal verb in the infinitival form to be embedded under a modal. This observation is orthogonal to the point of this section and it does not hold implications for the argument above, but it can be insightful for unrelated theoretical questions. We observed in (178a) that the verb 'visit each other' cannot be embedded with a singular subject marker. However, as (i) below illustrates, this configuration is possible if the verb is in the infinitival form. Just like 'visit each other', my informant accepts any verb with the reciprocal affix *-an* in this construction.

(i) Si-tak-i ku-tembele-an-a.
NEG.SM.1SG-want-FV INF-tembele-RECP-FV
'I don not want to be involved in a situation of mutual visiting.'
(lit. 'I don't want to visit each other.')

Across languages, a closed class of predicates allow partial control: a control relation in which there is no strict identity between the controller and PRO, but the controller is included in PRO (Landau, 2013; Pearson, 2016). For example:

(ii) Irene$_i$ wanted [PRO$_{i+}$ to share a pizza].

(iii) Leila$_i$ wanted [PRO$_{i+}$ to meet early in the morning].

It was noticed that across different languages, partial control is possible only with verbs that allow the reciprocal 'with'-construction' (Sheehan, 2014; Authier and Reed, 2018a; Pitteroff and Sheehan, 2017), leading to the proposal that these specific cases are not instances of partial control, but of exhaustive control with a null comitative. Sheehan (2014) referred to such cases as 'fake partial control'. Given the productivity of the reciprocal 'with'-construction, Swahili constitutes an ideal candidate for validating theories of fake partial control. In this respect, it is worth noting that the Swahili pattern in (i) is also accessible with verbs that are considered 'exhaustive control predicates' in different languages (Landau, 2013), like 'try' (iv).

(iv) Ni-ta-jaribu ku-tembele-an-a (na wewe).
NEG.SM.1SG-FUT-try INF-visit-RECP-FV with you
'I will not try to be involved in a situation of mutual visiting (with you).'
(lit. 'I will not try to visit each other (with you).')

While these data require further investigation, they provide a promising starting point for supporting an analysis of (fake) partial control as exhaustive control with a covert comitative, or to offer a broader perspective on the subject.

I argue that they are lexical reciprocal predicates, where *-an* is lexicalized as part of the verb entry.

5.2.2 Habituality

As seen above, the reciprocal morpheme *-an* leads to ungrammaticality with a singular subject (and without a post-verbal 'with'-phrase). We earlier considered this generalization in relation to example (177), repeated below in (182).

(182) * Nala a-na-pend-an-a. (=177)
Nala SM.3SG-PRS-love-RECP-FV

This generalization is countered by a very restricted number of reciprocal predicates that are acceptable with a singular argument. One example is *pigana* 'fight': the sentence in (183) below is acceptable to refer to a situation in which Nala is involved in a fight. Crucially, the interpretation of the transitive stem is not preserved, and the clause in (183) does not imply that Nala is hitting someone, nor that she is being hit.

(183) Nala a-na-pig-an-a.
Nala SM.3SG-PRS-hit-RECP-FV
'Nala is fighting.'

Only a handful of reciprocal predicates allow a singular subject marker in simple finite clauses like in (183); this configuration sounds rather unnatural with most verbs. However, the acceptability with a singular subject extends to more predicates if we use the habitual TAM marker.

The habitual TAM marker *hu-* is the only Swahili TAM marker where subject agreement is dropped (Keach, 1995; Zerbian and Krifka, 2008). It describes a habitual or repeated action, or the general tendency of the subject to carry out the action described by the verb. For instance, (184) below refers to Laura's habit or tendency to eat early.

(184) Laura hu-l-a mapema.
Laura HAB-eat-FV early
'Laura usually eats early.'

Let us consider an example from the verb *pigana* 'fight', in (185) below. This sentence necessarily indicates Laura's tendency to fight. Once again, the meaning of the transitive entry is not preserved: the sentence cannot be interpreted with

Laura having the tendency to be involved in situations of mutual hitting, despite the fact that the transitive meaning of *piga* is 'hit'. Similarly, (186) below refers to Laura's tendency to compete (and not to be involved in circumstances involving mutual defeats), and (187) indicates Laura's tendency to be involved in break-ups (and not in situations of mutual abandonment).

(185) Laura hu-pig-an-a.
Laura HAB-hit-RECP-FV
'Laura is always fighting.'

(186) Laura hu-shind-an-a.
Laura HAB-defeat-RECP-FV
'Laura is always competing.'

(187) Laura hu-ach-an-a.
Laura HAB-abandon-RECP-FV
'Laura is always breaking up.'

Crucially, the possibility of appearing with a singular subject and the habitual marker *hu-* is restricted. This pattern does not extend to any ordinary transitive predicate bearing the morpheme *-an*. As the sentences below exemplify, this configuration is ungrammatical with verbs like 'love each other' (188), 'congratulate each other' (189) or 'visit each other' (190):

(188) * Laura hu-pend-an-a.
Laura HAB-love-RECP-FV

(189) * Laura hu-pongez-an-a.
Laura HAB-congratulate-RECP-FV

(190) * Laura hu-tembele-an-a.
Laura HAB-visit-RECP-FV

As the data above suggest, the reciprocal morpheme *-an* leads to ungrammaticality with a singular argument. Thus, I take the acceptability of clauses like (185)-(187) as an indication that they do not contain verbs that are the outcome of a productive reciprocal operation, but intransitive predicates with a lexical reciprocal entry.[12]

[12]The possibility of taking a singular subject is not a property of all lexical reciprocal verbs across languages. In English or Greek, for instance, only some predicates with a lexical reciprocal entry can appear with a singular subject, as shown in (i)- (ii) below.

5.3 Affix ordering

In Swahili verb structure, the slot following verb stems is dedicated to verbal extensions. Some of these affixes can combine with one another, and the order in which they do is a subject of discussion in the literature. There are different proposals on what determines the order of verbal extensions in Bantu languages. One proposal, advanced by Hyman and Mchombo (1992) and further supported by Hyman (2003), argues for a default order in which verbal affixes appear in Bantu, referred to as the CARP template (Caus>Appl>Recp>Pass). Another perspective aligns with the idea that the order of morphemes reflects the order of the syntactic derivation, in line with the *mirror principle* (Baker, 1985). Ngonyani (1995, 1998) presented Swahili data supporting this generalization: taking the applicative morpheme as a case study, Ngonyani proposed that the order of the morphemes is based on the order in which the morphemes apply to the predicate.

In this debate, the literature does not explicitly take into account the possible role of lexicalized entries in determining the order of verbal affixes. Under the assumption that Swahili lexical reciprocals are predicates where *-an* is a lexicalized part of the entry, we can hypothesize that in these verbs *-an* cannot be separated from the rest of the verb stem, constituting a restriction on the order of verbal extensions.

In the rest of this section, I will show that this prediction is borne out. It is important to note that providing a theory of affixation in Swahili goes beyond the scope of this section. Here, I will solely focus on the interaction between reciprocal entries and the order and combination of applicative and causative morphemes. I will argue that lexical reciprocal verbs do not allow the applicative morpheme to precede *-an* (§5.3.1), and that they can combine with the causative morpheme, whereas grammatical reciprocals do not freely feed the causative derivation (§5.3.2).

(i) a. Mary is always fighting/competing.

b. * Mary is always kissing/hugging.

(ii) a. O Babis panta trogetai. (Greek)
the Babis always eat.NACT.PRS.3SG
'Babis is always arguing.'

b. * O Babis panta filietai.
the Babis always kiss.NACT.PRS.3SG

5.3.1 The applicative morpheme

The interaction between applicative and reciprocal morphemes is thoroughly discussed in Ngonyani (1995), where the author argued that these two affixes can combine with one another, and that their order is determined by the syntactic derivation. Ngonyani proposed that when the morpheme order is APPL>RECP the applied object is reciprocalized, whereas when the morpheme order is RECP>APPL it is the direct object that is reciprocalized. Let us consider the two examples in (191) and (192) below. In (191) *zawadi* 'presents' is the direct object, whereas the applicative morpheme introduces an argument (in this case, with the thematic role of a beneficiary) that is reciprocalized. In (192), *zawadi* 'presents' is the applied argument introduced by the applicative morpheme (in this case denoting the motive of the event denoted by the verb), while the direct object of the verb 'hit' is reciprocalized.

(191) Wageni wa-li-nunul-i-an-a zawadi.
guests SM.3PL-PST-buy-APPL-RECP-FV present
'The guests bought presents for each other.'
(Ngonyani, 1995, p.15)

(192) Wageni wa-li-pig-an-i-a zawadi.
guests SM.3PL-PST-hit-RECP-APPL-FV present
'The guests hit each other for presents.'
(Ngonyani, 1995, p.15)

Ngonyani (1995) presented some restrictions on the type of applied arguments that can be reciprocalized, but they solely rely on the thematic role of the object, without considering constraints related to the lexical entries to which the morphemes attach. I argue that while these generalizations capture the interaction of the applicative morpheme with the productive reciprocal strategy, lexical reciprocals do not allow the applicative morpheme to precede *-an*.

With grammatical reciprocals, both morpheme orders are in principle possible, with the restrictions outlined by Ngonyani. By contrast, with lexical reciprocals, *-an* cannot be separated from the rest of the original verb stem: the APPL>RECP order is unaccessible. Let us consider the verb *gombana* 'argue' in (193). As shown in (193a) below, the RECP>APPL order is possible with this verb: the applied object denotes the motive of the argument. However, (193b) shows that the APPL>RECP order results in ungrammaticality: *-an* is here inseparable from the rest of the verb stem.

(193) a. Wa-na-gomb-an-i-a mchumba.
SM.3PL-PRS-argue-RECP-APPL-FV lover
'They argue for a lover.'

b. * Wa-na-gomb-i-an-a.
SM.3PL-PRS-argue-APPL-RECP-FV

With some transitive verbs for which I characterize a separate intransitive reciprocal meaning, the APPL>RECP order may be acceptable, but only under the interpretation that preserves the meaning of the transitive verb stem. For example, let us consider the transitive verb *pamba*, which could be translated as 'decorate, adorn'. The reciprocal form *pambana* can get the reciprocal interpretation 'decorate each other', but also a logically distinct reciprocal meaning that denotes a mutual conflict, or a fight. With this verb, in the affix order RECP>APPL, the applicative morpheme introduces the argument 'life' (194a). By contrast, in the APPL>RECP order, the applied object refers to the location of the event, whereas the reciprocal affix reciprocalizes the transitive entry (194b); in this case, the only accessible reciprocal reading is 'decorate each other'.

(194) a. Tu-li-pamb-an-i-a maisha.
SM.2PL-PST-decorate-RECP-APPL-FV life
'We fought for life.'

b. Wa-li-pamb-i-an-a nyumba.
SM.3PL-PST-decorate-APPL-RECP-FV home
'They decorated each other at home.'

I assume that in (194a) the applicative morpheme introduces an applied argument to the intransitive verb *pambana* 'fight', while in (194b) the applicative and the reciprocal morphemes apply to the transitive verb *pamba* 'decorate'. These data support the proposal that lexical reciprocals are predicates in which

-an is lexicalized as part of the stem: the insertion of any grammatical material between *-an* and the rest of the verb stem is disallowed. This is in contrast with instances where the applicative and the reciprocal morphemes apply to a transitive entry: in such cases, both morpheme orders are in principle possible, with the restrictions outlined by Ngonyani (1995).

5.3.2 The causative morpheme

Some but not all Swahili verbs can be causativized through the affix *-ish* (Krifka, 2005). The interaction between reciprocal and causative morphemes is unclear: examples where these two morphemes combine with one another are sparse in the literature (Ngonyani, 1995; Krifka, 2005). It remains uncertain to what extent this combination is general, and what factors determine possible restrictions.

For my informants, the combination of causative and reciprocal morphemes is excluded with the vast majority of predicates. For instance, the verb *sikiliza* 'listen' can be causativized by the morpheme *-ish*, as shown in (195). However, this form is deemed ungrammatical in combination with the reciprocal morpheme, as shown in (196): the reciprocal and the causative affixes cannot combine, neither in the RECP>CAUS order (196a), nor in the CAUS>RECP order (196b).[13]

(195) Ni-li-wa-sikiliz-ish-a.
SM.1SG-PAST-OM.3PL-listen-CAUS-FV
'I caused them to listen.'

(196) a. * Ni-li-wa-sikiliz-an-ish-a.
SM.3PL-PST-OM.3PL-listen-RECP-CAUS-FV

b. * Ni-li-wa-sikiliz-ish-an-a.
SM.1SG-PST-OM.3PL-listen-CAUS-RECP-FV

The restriction on the combination the causative morpheme with reciprocal verbs is not ubiquitous: certain reciprocal predicates can combine with the

[13] To causativize reciprocal verbs, an analytic causative construction is instead used: in (i) the verb *sikiliza* 'listen' with the reciprocal morpheme is embedded under the causative *fanya* 'make'. I did not encounter any restrictions on verbs that can appear in an analytic causative.

(i) Ni-na-wa-fany-a wa-na-sikiliz-an-e.
SM.1SG-PRS-OM.3PL-make-FV SM.3PL-PRS-listen-RECP-FV
'I cause them to listen to each other.'

causative morpheme. Let us consider the verbs *pigana* 'fight' (197), *gawana* 'share' (198) and *shindana* 'compete' (199). In the examples below, these verbs combine with the causative morpheme -*ish*, and in the meaning of the transitive verb stem is not preserved. For instance, the sentence in (197) refers to a fight (not to mutual hitting). Similarly, the example in (198) refers to a sharing event, and (199) refers to a competition.

(197) A-li-ni-pig-an-ish-a na Laura.
SM.3SG-PST-OM.1SG-hit-RECP-CAUS-FV with Laura
'She caused me to fight with Laura.'

(198) Ni-li-wa-gaw-an-ish-a chapati.
SM.1SG-PST-OM.3PL-distribute-RECP-CAUS-FV chapati
'I made them share chapati.'

(199) Ni-li-wa-shind-an-ish-a.
SM.1SG-PST-OM.3PL-defeat-RECP-CAUS-FV
'I caused them to compete.'

Given that causative and reciprocal morphemes cannot freely combine, as seen earlier in (196), I take the acceptability of the examples above as support for the assumption that causativization in (197)-(199) must apply to intransitive verbs with an inherent reciprocal meaning. This hypothesis gains support from two observations. First, only the lexicalized readings are accessible, while the meaning of the transitive entry is not preserved; this hints to the fact that -*an* is not operating on the transitive stem in such cases. Second, the causative morpheme never appears between -*an* and the rest of the verb stem: the CAUS>RECP order is deemed ungrammatical.

I therefore assume that lexical reciprocals can feed the causative operation, while the productive reciprocal strategy cannot be freely causativized by -*ish*. It must be stressed that this generalization may be too strong: based on the collected data, I cannot exclude that there may be grammatical reciprocals that undergo causativization that were not captured in the elicitations. What I can safely generalize, however, is that the lexical reciprocals identified in this section can all undergo causativization, while this generalization does not hold for all transitive predicates reciprocalized by -*an*. Further research may reveal specific restrictions on the combination of causative and applicative morpheme.

5.4 Summary

Throughout section 5, I have substantiated a distinction between grammatical and lexical reciprocity in Swahili, based on a set of properties summarized below in Table 4.1.

	grammatical reciprocals	**lexical reciprocals**
pseudo-reciprocal interpretation	−	+
singular subject	−	+
APPL>RECP	+	−
RECP>CAUS	−	+

Table 4.1: Properties of Swahili grammatical and lexical reciprocals.

I categorize as lexical reciprocals the verbs that exhibit all the properties reported in Table 4.1. It is important to note that there is no specific property that I consider a sufficient condition for the characterization of a verb as lexical reciprocal. Some of the properties considered above may have restrictions that are unrelated to the question of lexical reciprocity. For instance, it is not possible to exclude that affixation may be restricted with some predicates, due to reasons that are independent from the proposed characterization. Similarly, licensing of a singular subject may not be possible with all verb meanings (similarly to English and other languages), even though they are expected to have an intransitive reciprocal entry.[14] Therefore, due to possible idiosyncrasies, I recognize that the categorization may not be exhaustive of all lexical reciprocal predicates in Swahili. Based on these differentiating properties, an illustrative list of Swahili lexical reciprocal verbs was provided earlier in (169); a more comprehensive overview of the properties of these verbs is given in Appendix C.

[14] As an example, note that a symmetric verb like *kutana* 'meet' is expected to have a lexical reciprocal entry, but it is not accepted with a singular subject (i).

(i) a. ? Laura hu-kut-an-a.
Laura HAB-meet-RECP-FV

b. * Si-tak-i ni-kut-an-e.
NEG.SM.1SG-want-FV SM.1SG-meet-RECP-FV

6 The syncretism of Swahili *-an*

I assume that the verbs identified throughout section §5 as grammatical or lexical reciprocals are the outcome of two distinct processes. Although both strategies result in the same surface form, the marker *-an* cannot receive a unified treatment. While this morpheme denotes a reciprocity operator that grammatically reduces the arity of all transitive verbs, its meaning contribution with lexical reciprocals is not compositional: it acts as a marker, similarly to lexicalized reciprocity markers with lexical reciprocals in other Bantu languages (§3).

Grammatical reciprocals appear with ordinary transitive predicates like *penda* 'love', *tembelea* 'visit' or *pongeza* 'congratulate', as well as for the transitive alternates of verbs that are lexical reciprocals, like *piga* 'hit'. Thus, the transitive entry *piga* can receive a reciprocal interpretation through *-an* affixation, as sketched in Table 4.2 below. This treatment is in line with analyses of reciprocal morphemes as valence-reducing operators in other Bantu languages, as proposed by Mchombo (1993), Dalrymple et al. (1994) and Wunderlich (2015). As a result of this productive affixation, grammatical reciprocals receive a plain reciprocal interpretation (which entails multiple unidirectional relations), and they require a plural argument. Moreover, in Swahili these verbs can combine with the applicative morpheme in the order that reflects the derivation (Ngonyani, 1998), but they cannot (always) combine with causative morphemes.

verb	**interpretation**	**composition**	**reciprocity**
pigana	'hit each other'	piga$[an]_{\text{RECP}}$a	grammatical
pigana	'fight'	$[\text{pigana}]_{\text{RECP}}$	lexical

Table 4.2: Swahili lexical and grammatical reciprocals

By contrast, lexical reciprocal predicates are not the outcome of a productive reciprocal operation; rather, they are intransitive predicates with an inherent collective interpretation. I argue that in such verbs, *-an* is lexicalized as part of the verb stem, just like in other Bantu languages explored in §3. This is exemplified for *pigana* 'fight' in Table 4.2. We saw that Swahili lexical reciprocals have the same pseudo-reciprocal interpretations as similar intransitive verbs in other languages, and that they may appear without the requirement of a plural argument. Further, the lexicalized nature of *-an* is supported by the inseparability of the marker from the rest of the verb stem, as in case of the

applicative morpheme.

7 Concluding remarks

The verbal extension *-an* is a widespread strategy to express reciprocity in Bantu languages. In this chapter I have focused on Swahili, where *-an* is the only productive affix associated with reciprocal interpretations. I demonstrated that reciprocity in Swahili can emerge from two distinct processes that result in identical surface realizations: *grammatical reciprocity*, where *-an* reciprocalizes a verb by reducing its valency, and *lexical reciprocity*, where reciprocity is expressed by the inherent meaning of an intransitive predicate where *-an* is lexicalized. I have supported this proposal relying on different properties differentiating lexical reciprocals from ordinary transitive predicates that underwent productive reciprocalization.

The Swahili data presented in this chapter allowed us to examine how lexical reciprocity is manifested in a language where reciprocalization is marked at the verbal level, allowing a broader comparative perspective on the properties of lexical reciprocity across different languages. We have seen that the semantics of lexical reciprocals in Swahili is comparable to lexical reciprocals identified in Romance in Chapter 2: they uniformly lead to pseudo-reciprocal interpretations. However, contrasts between these languages also emerged. In Chapter 2 we saw that Romance lexical reciprocals may express reciprocity with no grammatical marking. Quite the opposite, Swahili lexical reciprocals differ from the productive grammatical strategy in that *-an* is lexicalized, thus inseparable from the rest of the verb stem.

We have also observed that properties commonly associated with lexical reciprocals in Romance and other languages, such as nominalizations or the reciprocal 'with'-construction, are characteristic of all reciprocal verbs in Swahili. The comparative perspective that emerged may constitute a first step for disentangling the properties that are (cross-linguistically) characteristics of lexical reciprocity and properties that may be attributed to the occurrence of reciprocalization through verbal extensions. The next chapter will address this question, focusing on the reciprocal 'with'-construction and its realization across different languages.

CHAPTER 5

The reciprocal 'with'-alternation in Swahili

1 Introduction

Following Levin's (1993) terminology, I refer to the *reciprocal 'with'-alternation* as the possibility of a predicate encoding the participants of a reciprocal configuration either as a conjoined subject, like in the Greek example in (200a), or to encode part as the subject and part through a comitative, as in (200b) below. I specifically refer to the construction in (200b) as *reciprocal 'with'-construction.*

(200) a. O Yanis kje i Maria filithikan. (Greek)
the John and the Maria kiss.NACT.PST.3PL
'John and Maria kissed.

b. O Yanis filithike me ti Maria.
the John kiss.NACT.PST.3SG with the Maria
'John and Maria kissed.'

(Dimitriadis, 2008b, p.388)

Dimitriadis (2008b) observed that Greek 'with'-constructions generally receive a so-called 'irreducible' interpretation: the example in (200a) above is in line with a mutual kiss between John and Maria (and it cannot denote multiple distinct events consisting of unidirectional kisses). In Chapter 2, I have referred to this kind of interpretation as *pseudo-reciprocal*, and we have seen that it is characteristic of lexical reciprocal predicates. A pattern similar to Greek has been observed in other languages, including English, Hungarian and Hebrew, and it has led to the generalization that 'with'-constructions are associated with pseudo-reciprocal interpretations (Dimitriadis, 2008a). Across these languages, the reciprocal 'with'-alternation is restricted to lexical reciprocal verbs, and it is inaccessible with grammatical reciprocals. This is illustrated in the Greek examples in (201) below: the productive quantificational strategy in (201a) leads to ungrammaticality in the 'with-'construction (201b).

(201) a. O Yanis kje i Maria filisan o enas ton alo. (Greek)
the John and the Maria kiss.PST.3SG the one the other
'John and Maria kissed each other.

b. * O Yanis filise o enas ton alo me ti Maria.
the John kiss.PST.3SG each other with the Maria
(Dimitriadis, 2004, p.2)

The generalizations regarding the pseudo-reciprocal interpretation of 'with'-constructions and their restriction to lexical reciprocity apply to several languages, but they do not seem to extend to Bantu. As we saw in Chapter 4, the 'with'-alternation is a general property of Swahili reciprocals: in this language, any verb bearing the reciprocal affix *-an* can appear in the reciprocal 'with'-construction. This is illustrated in (202) below with *saidiana* 'help each other', a predicate that was characterized as grammatical reciprocal in Chapter 4. In (202a) the participants of the reciprocal relation are encoded as a conjoined subject; by contrast, in (202b) one participant is the encoded as the subject and the other is introduced by the comitative *na*.[1]

(202) a. Juma na Halima wa-na-saidi-an-a.
Juma and Halima SM.3PL-PRS-help-RECP-FV
'Juma and Halima help each other.'

[1] Unless another language is indicated, the examples presented in this chapter are from Swahili.

b. Juma a-na-saidi-an-a na Halima.
Juma SM.3SG-PRS-help-RECP-FV with Halima
'Juma and Halima help each other.'

In Swahili, not only is the 'with'-construction possible with any reciprocal verb, but it also does not necessarily lead to pseudo-reciprocal interpretations. Sentence (202b) above refers to multiple 'unidirectional' helping events, like the English grammatical reciprocal form in the free translation: Juma helps Halima and Halima helps Juma.

The deviation of Swahili from the aforementioned generalizations raises some questions. Firstly, it leads to questions about the properties of the 'with'-alternation in this language: whether the 'with'-construction is equally available with both lexical and grammatical reciprocals, and what interpretations arise with each of these strategies. Secondly, it prompts questions of a cross-linguistic nature. Does Swahili represent a rather isolated case, or are there more languages exhibiting a productive reciprocal 'with'-alternation? What shared characteristics do these languages have? Finally, this leaves open the question of whether the reciprocal 'with'-alternation is independent of lexical reciprocity, even in languages like Romance, where we considered it as an identifying characteristic of this class of verbs in Chapter 2.

The aim of the current chapter is to address these questions. The exploration will primarily rely on Swahili, while also considering data from unrelated languages. I will show that the 'with'-construction is possible with both lexical and grammatical reciprocals in Swahili, and it can receive either a plain or a pseudo-reciprocal interpretation, depending on the entry of the verb. We will see that this pattern is not unique to Swahili (or Bantu): the 'with'-construction is available with grammatical reciprocals across different unrelated languages, all characterized by the expression of reciprocity through verbal morphology. The emerging generalization is that the 'with'-construction is possible with verbs that express reciprocity at the verbal level. In languages like Greek or English, where only lexical reciprocals express reciprocity with (zero) verbal morphology, the 'with'-construction is a prerogative of predicates with a lexical reciprocal entry. However, undergoing the reciprocal 'with'-alternation is not a cross-linguistic property of this class of verbs. The descriptive generalizations that emerge throughout chapter open up questions on the semantic and syntactic implications of this pattern, while providing empirical grounds for further studies.

The chapter unfolds as follows. In §2, I review previous studies on the reciprocal 'with'-construction in Bantu, and I evaluate their applicability to Swahili in light of the data explored in this chapter. In §3, I provide an overview of the properties of the reciprocal 'with'-alternation in Swahili. In §4, I review instances of other (non-Bantu) languages where grammatical reciprocals can undergo the 'with'-alternation. In §5, I discuss languages where the reciprocal 'with'-alternation is restricted to lexical reciprocals. Finally, §6 wraps up the chapter with some general conclusions.

The data from Swahili and Wolof presented in this chapter were collected during the same interviews with native speakers reported in the previous chapters.

2 Previous studies

In the literature, different analyses have been proposed in order to account for the general acceptability of the reciprocal 'with'-construction in Bantu languages. Let us review some relevant proposals below, and discuss their applicability to Swahili and other languages.

Mchombo (1993) treated the 'with'-construction in Chichewa as a case of extraposition aimed at solving gender mismatch. In short, if the reciprocal relation holds between two NPs that belong to different nominal classes, the 'with'-construction enables verbal agreement only with the syntactic subject, resolving the mismatch. For example, in (203a) below the two conjoined nouns 'tree' and 'person' belong to different nominal classes.[2] The reciprocal 'with'-construction in (203b) is used to ensure verbal agreement with the first conjoint, through the subject marker *u-*.

(203) a. # Mtengo ndi munthu ?-na-gwer-ana. (Chichewa)
tree and person ?-PST-fall.on-RECP

b. Mtengo u-na-gwer-ana ndi munthu.
tree SM-PST-fall.on-RECP with person
'A tree and a person fell on each other.'
(Mchombo and Ngalande, 1980, p.574)

[2]The nominal classes of the two NPs are not specified by the authors.

Mwamzandi (2012) observed that there are not solid grounds to extend this analysis to Swahili, since this language does not need to resort to the 'with'-construction to solve verbal agreement. Marten (2000) showed that in Swahili, two nouns belonging to different classes can trigger verbal agreement with either the first or the second conjunct, or with neither of them. The latter case is attested with Swahili reciprocals. Mwamzandi (2012) provided an example where a conjunction of nouns from different nominal classes occur as the subject of a reciprocal verb (204). In this sentence, the verb bears a subject marker of class 8, which does not agree with any of the NPs (which belong to noun class 11 and 9).

(204) U-limi wa moto na sigara vi-ka-kut-an-a
[11]-tongue of fire and [9]cigarette SM[8]-SEQ-meet-RECP-FV
njia-ni.
way-LOC
'The tongue of fire and the cigarette met midway.'
(Mwamzandi 2012, p.63)

The availability of a recovery agreement strategy in Swahili reciprocals shows that this language does not need to rely on the 'with'-construction to insure syntactic verbal agreement. Therefore, the general availability of the 'with'-construction in Swahili cannot be solely motivated by nominal class agreement.

Vitale (1981) also argued that the Swahili reciprocal 'with'-construction is syntactically derived from the reciprocal construction with a conjoined subject. Baker et al. (2013) proposed an analysis along these lines for the reciprocal 'with'-construction in Lubukusu. Lubukusu is a Bantu language where the preposition *ne* takes the role of both NP conjunction (205) and comitative (206). The same polysemy is found in Swahili with the preposition *na*.

(205) Omuhayi ne etwika by-á-bon-an-a. (Lubukusu)
[1]hunter and [9]giraffe SM[8]-PST-see-RECP-FV
'The hunter and the giraffe saw each other.'
(Baker et al. 2013, p.201)

(206) Omuhayi á-bon-an-a ne etwika. (Lubukusu)
[1]hunter SM[1]-PST-see-RECP-FV with [9]giraffe
'The hunter and the giraffe saw each other.'
(Baker et al. 2013, p.201)

Baker et al. (2013) proposed that the reciprocal 'with'-construction in Lubukusu is derived through the split of the conjoined subject in the course of the syntactic derivation. They argued that in a 'with'-construction like (206), the argument (*omuhayi ne etwika*) originates together, and the first conjunct (*omuhayi*) raises out of the full conjunction and receives singular agreement, while the second conjunct (*etwika*) is left stranded.

This account predicts that the entity encoded as syntactic subject and the entity introduced by the comitative are a constituent. However, this fact is challenged for Swahili. Seidl and Dimitriadis (2003) demonstrated that the participants of a reciprocal 'with'-construction cannot be considered a constituent in this language. The 'with'-construction with the verb 'compete' in (207) contains the causative morpheme *-ish*. In this sentence, only one participant of the reciprocal configuration (the one encoded as syntactic subject) is caused to compete. Seidl and Dimitriadis (2003) regarded this as evidence that the comitative cannot be part of the logical subject at the level on which causativization applies.

(207) A-li-ni-shind-an-ish-a na Mike Tyson.
SM.3SG-PST-OM.1SG-defeat-RECP-CAUS-FV with Mike Tyson
'He made me compete with Mike Tyson.'
#'He made me and Mike Tyson compete.'
(Seidl and Dimitriadis 2003, p.25)

Another challenge comes from the difference in interpretation between reciprocal verbs with plural conjoined NPs and their counterparts in the 'with'-construction. Let us consider the examples in (208)-(209) below. The clause with the conjoined NPs in (208) is considered ambiguous: it is in line with an interpretation where the fighting happened *between* the girls and the boys (208i), and with an interpretation where the fighting happened among the girls and among the boys (208ii). By contrast, only the former interpretation is available in the 'with'-construction in (209): the sentence unambiguously describes a fight between the individuals denoted by the subject and the individuals introduced by the comitative.

(208) Wasichana na wavulana wa-na-pig-an-a.
girls and boys SM.3PL-PRS-hit-RECP-FV
i. 'The girls and the boys fight each other.'
ii. 'The girls fight each other and the boys fight each other.'

(209) Wasichana wa-na-pig-an-a na wavulana.
girls SM.3PL-PRS-hit-RECP-FV with boys
i. 'The girls and the boys fight each other.'
ii. #'The girls fight each other and the boys fight each other.'

If the 'with'-construction in (209) was derived from the clause in (208), a difference in interpretation between the two would not be expected: the interpretation in (208i) should have remained accessible after the comitative was stranded.

Crucially, analyses that consider the 'with'-construction derived from clauses with a conjoined subject rely on the polysemy between NP conjunction and comitative. This polysemy is also central in the analysis proposed by Maslova (2007). Maslova (2007) treated the 'with'-construction in Bantu as a reciprocal construction where the participants share the same role, but they can take different syntactic positions, and the comitative marker is employed to introduce the secondary participant. This possibility is related to the polysemy between the conjunction and the comitative preposition (both expressed as *na*): this single marker is able to create both the coordinate NP structure and the comitative. This accounts predicts a correlation between the general availability of the reciprocal 'with'-construction and the expression of NP coordination and comitative through the same form. However, as we will see, the reciprocal 'with'-construction is also generally available in languages without an 'and'/'with' polysemy. Furthermore, these analyses do not make any prediction about restrictions on the 'with'-construction in languages that express coordination and comitative with the same form. The 'with'-construction is proposed to be derived from a reciprocal clause with a conjoined subject, and this possibility is insensitive to the other components of the structure. Yet, we will see that the reciprocal 'with'-alternation is restricted to verbal reciprocals, and it is inaccessible in reciprocal construction involving pronominal elements, also in languages with an 'and'/'with' polysemy, such as Turkish or Japanese. Thus, an analysis of the reciprocal 'with'-construction that relies on 'and'/'with' polysemy is suitable for Swahili, but it does not have the potential of explaining the productivity of this construction across languages.

The proposals reported above explain the productivity of the reciprocal 'with'-construction by relying on factors that are specific to Bantu, such as nominal class agreement or comitative/coordination polysemy, and they do not make predictions regarding the status of the the reciprocal 'with'-alternation cross-linguistically. Ideally, an account on the productivity of the 'with'-construction

could take Swahili (or Bantu more generally) as a case study, but it should also be compatible with a wider range of languages.

3 Properties of 'with'-reciprocals in Swahili

This section reviews some key properties of the reciprocal 'with'-alternation in Swahili. We will discuss its productivity (§3.1), the verbal agreement (§3.2) and its interpretation (§3.3).

3.1 Productivity

In Swahili, the reciprocal 'with'-alternation is productive: any reciprocal verb with the morpheme *-an* can appear in the 'with'-construction. This alternation is possible with verbs characterized as lexical reciprocals in Chapter 4, such as *pigana* 'fight' (210) or *gongana* 'collide', as well as with verbs that were characterized as transitive entries reciprocalized by a grammatical suffix, such as *pongezana* 'congratulate each other' (211) or *pendana* 'love each other'.

(210) a. Mary na Laura wa-na-pig-an-a.
Mary and Laura SM.3PL-PRS-hit-RECP-FV
'Mary and Laura hit each other/fight.'

b. Mary a-na-pig-an-a na Laura.
Mary SM.3SG-PRS-hit-RECP-FV with Laura
'Mary and Laura hit each other/fight.'

(211) a. Mary na Laura wa-na-pongez-an-a.
Mary and Laura SM.3PL-PRS-congratulate-RECP-FV
'Mary and Laura congratulate each other.'

b. Mary a-na-pongez-an-a na Laura.
Mary SM.3SG-PRS-congratulate-RECP-FV with Laura
'Mary and Laura congratulate each other.'

3.2 Singular verbal agreement

In the Swahili reciprocal 'with'-construction, the verb must agree with the syntactic subject. The sentence in (212) below is considered ungrammatical because the syntactic subject is singular, but the subject marker on the verb is plural.

(212) * Juma wa-na-pend-an-a na Halima.
Juma SM.3PL-PRS-love-RECP-FV with Halima
(Vitale 1981, p.151)

While this observation may appear trivial, it is not uncommon to encounter instances of reciprocal constructions with a comitative argument and plural agreement. This is the case in some Bantu languages, especially in colloquial speech (Bostoen et al., 2015), in Passamaquoddy (Bruening, 2004), or in some Evenki dialects (Nedjalkov and Nedjalkov, 2007).

3.3 Interpretations

Regarding the interpretation of the reciprocal 'with'-construction, in §3.3.1 I will show that in Swahili this construction can receive both plain reciprocal interpretations and pseudo-reciprocal interpretations, depending on the verb entry it contains. Additionally, in §3.3.2 we will see that the involvement of participants in the reciprocal configuration plays a role in the acceptability of the clause: Swahili 'with'-constructions are more easily accepted if the participant encoded as the syntactic subject is more active than the participant introduced by 'with'.

3.3.1 Plain & pseudo-reciprocal interpretations

In Chapter 2 we saw that in Romance (as well as in other languages, such as Greek or English), the reciprocal 'with'-construction consistently receives the pseudo-reciprocal interpretation typical of lexical reciprocal predicates. In Swahili, however, this construction can be in line with plain reciprocal interpretations, i.e., unidirectional relations that can hold between the participants at different times or in disconnected events. For instance, Mwamzandi (2014) argued that the 'with'-construction in (213) below refers to sequential unidirectional events spread across time: the Kikuyu visiting the Swahili and the Swahili visiting the Kikuyu.

(213) Wakikuyu wa-li-kuwa wa-ki-tembele-an-a na
Kikuyu SM.3PL-PST-AUX SM.3PL-PROG-visit-RECP-FV and
Waswahili ku-fanya biashara.
Swahili INF-do trade
'The Kikuyu and the Swahili used to visit each other to trade.'
(Mwamzandi 2014, p.145)

This observation is validated by the 'three times' test adopted in the previous chapter to discriminate between plain and pseudo-reciprocal interpretations. As seen in Chapter 4, upon modification with *mara tatu* 'three times', grammatical reciprocals are in line with a total of three or six events, whereas the intrinsic reading of lexical reciprocals is only in line with three events in total. The same interpretations emerge in the reciprocal 'with'-construction.

For example, the grammatical reciprocal verb 'visit each other' in (214) below supports an interpretation where there were three visits in total between Nala and Halima (214i), or an interpretation where Nala visited Halima three times and Halima visited Nala three times (214ii).

(214) Nala a-li-tembele-an-a na Halima mara tatu.
Nala SM.3SG-PST-visit-RECP-FV with Halima three times
'Nala and Halima visited each other three times.'
i. three visits in total
ii. six visits in total

Also reciprocal 'with'-constructions with lexical reciprocals support the same range of interpretations of parallel constructions with a conjoined subject. Let us consider the verb *pigana*. In Chapter 4, we saw that this predicate is ambiguous between a grammatical reciprocal interpretation 'hit each other' and a lexical reciprocal entry 'fight'. In the 'with'-construction in (215) below, the grammatical reciprocal reading is in line with three or six unidirectional hitting events it total (215i), whereas the lexical reciprocal reading only supports three collective fights in total (215ii).

(215) Nala a-li-pig-an-a na Halima mara tatu.
Nala SM.3SG-PST-hit-RECP-FV with Halima three times
'Nala and Halima hit each other/fought three times.'
i. three hitting events in total/ six hitting events in total
ii. three fights in total/ #six fights in total

These data indicate that the reciprocal interpretation of the Swahili 'with'-

construction is not necessarily plain. This construction receives a plain reciprocal interpretation with grammatical reciprocals, and a pseudo-reciprocal interpretation with lexical reciprocals, just like parallel reciprocal constructions with a conjoined subject.

3.3.2 Participants' involvement

From the literature, it is unclear whether the acceptability of the reciprocal 'with'-construction in Swahili is affected by the degree of involvement of the different participants encoded as subject or introduced by the comitative. Mwamzandi (2012) argued that the Swahili 'with'-construction has the same truth-value of corresponding sentences with a conjoined subject, and that the difference between the two constructions is attributable to information structure. Mwamzandi proposed that the 'with'-construction is used when the first argument is more prominent in the discourse, for instance if it had already been introduced. This account does not make predictions about the degree of involvement of the participants introduced by 'with' in the reciprocal relation.

By contrast, Bostoen et al. (2015) observed that the 'with'-construction in Bantu implies a higher degree of volition from the subject. In comparison, the participant introduced by the comitative lacks agentivity: although it is not an object syntactically speaking, the comitative argument is "object-like and patientive".

The data that I will present below show that the involvement of the participants does influence the acceptability of Swahili 'with'-constructions, but while the subject is perceived as more active, the comitative cannot generally be a mere patient.

Let us first consider the lexical reciprocal verb *achana* 'break up': this predicate is more easily accepted in the 'with'-construction if the subject is the initiator of the breakup. For instance, let us consider a scenario where Juma unilaterally terminated the relationship with Nala, who is left broken-hearted. A reciprocal construction where Juma and Nala are encoded as the subject, like (216a) below, was unanimously accepted as true in this scenario by my four consultants. Similarly, a reciprocal 'with'-construction where Juma (the initiator of the breakup) is the subject, as in (216a), was indisputably accepted as true. However, a 'with'-construction where the subject is Nala (the recipient of the breakup), like (216c), was not equally acceptable to the speakers. Out of

the four consulted speakers, only three consider it true in the scenario above. Of these three, two speakers consider the sentence strictly-speaking true, but commented that it describes the situation in a misleading way.

(216) context: Juma and Nala were in a romantic relationship, which was terminated by Juma.

a. Juma na Nala wa-li-ach-an-a.
Juma and Nala SM.3PL-PST-leave-RECP-FV
'Juma and Nala broke up.'

b. Juma a-li-ach-an-a na Nala.
Juma SM.3SG-PST-leave-RECP-FV with Nala
'Juma broke up with Nala.'

c. ? Nala a-li-ach-an-a na Juma.
Nala SM.3SG-PST-leave-RECP-FV with Juma
'Nala broke up with Juma.'

The same pattern emerges with the verb *gawana* 'share'. Let us consider a scenario where Juma gives half of his chapati to Nala. A reciprocal sentence with a conjoined subject (217a) is considered acceptable to describe this situation, and so is a 'with'-construction where Juma (the person giving the bread) is encoded as the subject (217b). However, a 'with'-construction where the subject is Nala (the recipient of the chapati) is more doubtfully accepted in this scenario. The sentence in (217c) is accepted by three out of four speakers, but again with the caveat that it is a misleading description of the situation.

(217) context: Juma and Nala went hiking, and Nala did not bring any food. Juma gave half of his chapati to Nala.

a. Juma na Nala wa-li-gaw-an-a chapati.
Juma and Nala SM.3PL-PST-distribute-RECP-FV chapati
'Juma and Nala shared chapati.'

b. Juma a-li-gaw-an-a chapati na Nala.
Juma SM.3SG-PST-distribute-RECP-FV chapati with Nala
'Juma shared chapati with Nala.'

c. ? Nala a-li-gaw-an-a chapati na Juma.
Nala SM.3SG-PST-distribute-RECP-FV chapati with Juma
'Nala shared chapati with Juma.'

In sum, to describe scenarios that involve only one active participant, the predicates 'break up' and 'share' are considered acceptable in a reciprocal

construction with a conjoined subject, or in a reciprocal 'with'-construction (preferably if the subject corresponds to the active participant). However, note that with these verbs a single unidirectional relation entails a collective form. This entailment relation, noted by Winter (2018) for predicates like 'break up' or 'divorce', is shown in (218) below.

(218) x broke up with $y \Rightarrow x$ and y broke up

This entailment relation does not hold for most predicates. For example, a grammatical reciprocal like 'visit each other' is equivalent to at least two unidirectional relations in different directions, as discussed in Chapter 2. For this reason, the pattern above does not generally hold for grammatical reciprocals: in scenarios where one participant is not active, these predicates are rejected altogether, both in 'with'-constructions and with a conjoined subject. Let us take as an example the verb *tembeleana* 'visit each other'. In a scenario where Juma visited Nala, all the constructions below are ruled out. The reciprocal verb is unacceptable with the conjoined subject (219a), and encoding Juma (the active participant) as the subject of the 'with'-construction does not improve the acceptability (219b). Unsurprisingly, the 'with'-construction is also rejected if the non-active participant is encoded as the subject (219c).

(219) context: Juma and Nala live on the same street. Juma visited Nala.

a. # Juma na Nala wa-li-tembele-an-a.
Juma and Nala SM.3PL-PST-visit-RECP-FV
'Juma and Nala visited each other.'

b. # Juma a-li-tembele-an-a na Nala.
Juma SM.3SG-PST-visit-RECP-FV with Nala
'Juma and Nala visited each other.'
(lit. 'Juma visited-RECP with Nala.')

c. # Nala a-li-tembele-an-a na Juma.
Nala SM.3SG-PST-visit-RECP-FV with Juma
'Juma and Nala visited each other.'
(lit. 'Nala visited-RECP with Juma.')

The data above suggest the acceptability of the reciprocal 'with'-construction in Swahili is influenced by the participants' involvement in a reciprocal relation. This construction is more readily accepted if the individual encoded as the subject is more active and engaged in the action than the individual introduced

by the comitative. However, the possibility of the comitative to be patientive is not general, as shown by (219b), but restricted to verb entries where the active participation of one individual is enough for the acceptability of a reciprocal form, as seen in the examples in (216b) and (217b) above.

4 Beyond Bantu: a cross-linguistic overview

As we saw, studies on the reciprocal 'with'-alternation in Bantu tend to explain the productivity of this construction by relying on properties that are specific to this group of languages. Yet, examining unrelated languages that share this property is necessary to formulate cross-linguistic generalizations about the availability of the reciprocal 'with'-construction.

In this section, we will consider data from non-Bantu languages where the reciprocal 'with'-construction is not restricted to lexical reciprocals. We will see that, just like Swahili, many of these languages express NP conjunction and comitative elements using the same form. Importantly, however, this polysemy is not a characteristic of all of them: the common trait between these languages is that they express grammatical reciprocity through verbal morphemes.

4.1 The role of verbal morphology

In Wolof (Niger-Congo, Atlantic), reciprocity is expressed through verbal morphology (Creissels and Nouguier-Voisin, 2008). The affix *-ante* is productive with transitive verbs, and it has been associated to grammatical reciprocity (Ros and Palmieri, Forthcoming). Any verb bearing the morpheme *-ante* can undergo the reciprocal 'with'-alternation. This is exemplified with the verb *dimbalante* 'help each other' in (220) below: reciprocity can be expressed with a conjoined subject (220a), or with one participant introduced in a comitative phrase (220b). Note that in Wolof, both NP coordination and comitative forms are expressed with the form *ak*.

(220) a. Khadi ak Fatou ñu ngui dimbal-ante. (Wolof)
Khady and Fatou PRS.3PL help-RECP
'Khady and Fatou help each other.'

b. Khadi mi ngui dimbal-ante ak Fatou.
Khady PRS.3SG help-RECP with Fatou
'Khady and Fatou help each other.'

Tuvan (Turkic, Siberian) can express reciprocity by the reciprocal suffix *-š*, treated as a valence-reducing morpheme by Kuular (2007). Kuular observed that all reciprocals derived through *-š* can appear in the reciprocal 'with'-construction.[3] This alternation is illustrated in (221) below. In (221a) the participants are encoded as the subject, and they are conjoined by *bile* 'and'. In (221b), by contrast, one participant ('I') is encoded as the subject, whereas the other ('my wife') is encoded with a comitative postposition (also realized as *bile*).

(221) a. Men bile kadaj-əm xündüle-ž-ip čor bis. (Tuvan)
I and wife-my respect-RECP-CONV AUX.PRS 1PL
'My wife and I respect each other.'

b. Men kadaj-əm-bile xündüle-ž-ip čor men.
I wife-my-with respect-RECP-CONV AUX PRS.1SG
'My wife and I respect each other.'

(Kuular, 2007, pp.1181-2)

In Indonesian (Austronasian), one of the means of expressing reciprocity is the productive circumfix *ber -an* (Ogloblin and Nedjalkov, 2007; Udayana et al., 2023). Ogloblin and Nedjalkov (2007) observed that verbs bearing this circumfix may express reciprocity with a conjoined subject, as in (222a), or in a reciprocal 'with'-construction, as in (222b).

(222) a. Amir dan Fatimah ber-cium-an. (Indonesian)
Amir and Fatimah RECP-kiss-RECP
'Amir and Fatima kiss.'

[3]Affixation with *-š* is not the only means of expressing reciprocity in Tuvan. Kuular (2007) illustrated that other strategies are found in this language, like reciprocal pronouns, but did not mention the availability of the 'with'-construction with such strategies.

b. Amir ber-cium-an dengan Fatimah.
Amir RECP-kiss-RECP with Fatimah
'Amir kisses with Fatima.'
(Ogloblin and Nedjalkov 2007, p.1469, my glosses)[4]

In Indonesian, reciprocal interpretations may also emerge when a verb root is reduplicated, with the active voice marker *meN-* in between, as in (223a); this strategy was reported as productive by Ogloblin and Nedjalkov (2007). Udayana et al. (2023) observed that instances of root reduplication are compatible with the reciprocal 'with'-construction, as illustrated in (223b).[5]

(223) a. Ani dan Ana pukul-me-mukul. (Indonesian)
Ani and Ana hit-AV-hit
'Ani and Ana hit each other.'

b. Tono pukul-me-mukul dengan Tini.
Tono hit-AV-hit with Tini.
'Tono and Tini hit each other.'
(Udayana et al., 2023)

Other forms associated with reciprocal interpretations in Indonesian include the auxiliary *sailing* 'mutually' and the expression *satu sama lain* 'one another' (lit. 'one with other'). Neither of these elements is acceptable in the reciprocal 'with'-construction, as shown in (224) and (225) below.

(224) * Saya saling men-cinta-i dengan Rayati. (Indonesian)
1SG mutually AV-love-CAUS with Rayati
'Rayati and I love each other.'
(Ogloblin and Nedjalkov 2007, p.1470, glosses from Udayana et al. 2023)

[4] I glossed *ber -an* as 'reciprocal', following the convention adopted by Ogloblin and Nedjalkov (2007) for other examples in their paper. This labeling is purely descriptive and does not carry any implications on the semantics of this circumfix. Note, in fact, that Udayana et al. (2023) proposed an analysis where *ber -an* is not a dedicated reciprocal marker.

[5] It is not straightforward to determine whether cases of reduplication with the marker *meN-* may be considered instances of verbal morphology comparably to those observed in the other languages examined in this section. I wish to thank John Beavers for bringing the case of Indonesian to my attention.

(225) * Saya men-cinta-i satu sama lain dengan Rayati.
1SG AV-love-CAUS one another with Rayati
'Rayati and I love each other.'
(Udayana et al., 2023)

In the example pairs of (222) and (223), NP conjunction (*dan* 'and') is distinct from the comitative preposition (*dengan* 'with'). However, it is worth noting that the comitative *dangan* can also be used to coordinate NPs (Stassen, 2003).

In the languages above, the 'with'-construction appears possible with productive reciprocal constructions attributable to grammatical reciprocity. In Wolof, the consulted informants considered the construction grammatical with any verb marked by *-ante*, whereas in Tuvan and Indonesian this productivity was explicitly reported in the literature. In other languages, the literature provides descriptions of the 'with'-construction that suggest its potential use with grammatical reciprocity. However, as explicit confirmation is lacking, the productivity of this construction remains unclear. Two such cases are presented below.

One case comes from Evenki (Altaic, Tungusic). In this language, reciprocity can be expressed by the verbal suffix *-maat*. Nedjalkov and Nedjalkov (2007) reported instances of this morpheme in clauses with a conjoined subject (226a) or in a reciprocal 'with'-construction (226b).[6]

(226) a. Eni hunat-nun-mi n'ukani-maat-čere-∅. (Evenki)
mother daughter-with-her kiss-RECP-PRS-3PL
'Mother and her daughter are kissing each other.'

b. Eni hunat-nun-mi n'ukani-maat-čere-n.
mother daughter-with-her kiss-RECP-PRS-3SG
'Mother and her daughter are kissing each other.'

(Nedjalkov and Nedjalkov, 2007, p.1607-8)

Nedjalkov and Nedjalkov (2007) noted that the Evenki suffix *-nun* can be used to conjoin two NPs, as in (226a) above, or it can encode a comitative, as in (226b). Crucially, the two examples above have the same word order. For this reason, the only identifying characteristic of the reciprocal 'with'-construction in this language is verbal agreement: in (226b) the verb is in the singular form,

[6] Nedjalkov and Nedjalkov (2007) discussed that a pronominal reciprocal strategy is also available in Evenki, but did not report any instances of the reciprocal 'with'-construction in this strategy.

and it agrees with the subject *eni* 'mother'. Nedjalkov and Nedjalkov (2007) presented examples from the reciprocal 'with'-construction in Evenki, such as (226b) above, and discussed dialectal variation of this construction. However, it was not explicitly stated whether it is accessible with all verbs reciprocalized by the morpheme *-maat*.

Another relevant case comes from Quechua. Van de Kerke (2007) reported that in Bolivian Quechua reciprocals are expressed by means of suffixation with *-na-ku* (composed of the reciprocal *-na* and the reflexive *-ku*). Van de Kerke observed that one of the possible ways to express the participants of a reciprocal relation is by encoding one participant with the comitative suffix *-wan*, which is also used as a coordination marker in this language. An example is provided in (227) below. Here, the verb is marked by the reciprocal suffix *-na-ku* and agrees with the syntactic subject ('I'), while the other participant ('Pedru') is marked by the comitative *-wan*.

(227) [noqa] Pedru-wan puqlla-na-ku-sa-ni. (Bolivian Quechua)
I Peter-with play-RECP-REFL-DUR-1SG
'Peter and I are playing with each other.'
(Van de Kerke, 2007, p.1380)

Van de Kerke (2007) observed that this construction is not a prerogative of the Bolivian variety of Quechua, but is also found in the Ayacucho dialect; the sentence in (228) below contains an example from this variety. The 'with'-construction is also reported by Faller (2007) for Cuzco Quechua. Faller noted that one of the ways to express the agent the reciprocal event may be with a subject NP and a comitative NP, as in (229) below.

(228) ñoqa qam-wan yanapa-na-ku-ni. (Ayacucho Quechua)
I you-with help-RECP-REFL-1SG
'We help each other.'
(Guardia Mayorga 1973, p.297; glosses from Van de Kerke 2007, p.1380)

(229) Qusqu kay-man-qua ham-pu-ra-ni, chicu-cha-y-pa papa-n-wan
Cuzco this-ILL-TOP come-DEF-PST-1 boy-DIM-1-GEN father-3-with
t'aqa-na-ku-spa. (Cuzco Quechua)
separate-RECP-REFL-NMLZ.SS
'I came here to Cuzco after the father of my boy and I separated from each other.'
(Faller 2007, p.297)

These studies present the 'with'-construction as one of the possible ways for expressing reciprocity in different varieties of Quechua. However, it is not explicitly stated whether there are restrictions on the kind of predicates that may appear in it. If we consider the meaning of the verbs, the example in (228) may seem typical of grammatical reciprocity: the verb 'help' does not have an interpretation generally associated to 'naturally reciprocal' events (in the sense of Kemmer 1993). However, this remains speculative, and a reliable generalization on the productivity of the with'-construction in Quechua must rely on more data.

In conclusion, the languages considered in this section share two properties: (i) they can express grammatical reciprocity with verbal morphemes and (ii) they (can) express NP coordination and comitative with the same form. In the next section, we will see that the latter property is not shared by all languages that allow the 'with'-construction with grammatical reciprocals.

4.2 The role of 'with'/'and' polysemy

Earlier in §2, we saw that some studies rely on the formal identity between NP conjunction and comitative preposition to explain the general availability of the reciprocal 'with'-construction in Bantu. While this approach may in principle be extended to the languages reviewed above in §4.1, it does not have the potential to explain the cross-linguistic availability of this construction. As we will see in this section, any analysis of 'with'-reciprocals that relies on 'with'/'and' polysemy cannot account for the general availability of the 'with'-alternation in languages without such a polysemy, nor for the restriction of the 'with'-construction to verbal reciprocals in languages with a 'with'/'and' polysemy.

Let us first discuss three languages that express NP coordination and comitative with different forms: Malagasy, Mundari and Turkish.

In Malagasy (Austronasian), reciprocity is derived through the productive verbal morpheme *if-* (Keenan and Razafimamonjy, 2004). Keenan and Razafimamonjy (2004) remarked that verbs reciprocalized by *if-* can undergo the reciprocal 'with'-alternation; this process is illustrated with the verb 'chase' in (230) below. In (230a) the participants of the reciprocal relation are encoded as the subject, whereas in (230b) one of them is introduced by a comitative preposition. Note that in Malagasy there is no formal identity between NP

conjunction and comitative froms (Dez, 1980).

(230) a. M-if-an-enjika Rabe sy Rakoto. (Malagasy)
PRS-RECP-ACT-chase Rabe and Rakoto
'Rabe and Rakoto are chasing each other.'
(Keenan and Razafimamonjy, 2004, p.177)

b. M-if-an-enjika amin-dRabe Rakoto.
PRS-RECP-ACT-chase with-Rabe Rakoto
'Rakoto and Rabe are chasing each other.'
(Keenan and Razafimamonjy, 2004, p.183)

In Mundari (Austroasiatic, Munda), reciprocity is expressed with the infix *-pV-*, which is productive and can attach to any transitive verb (Osada, 2007). Osada observed that one of the ways to encode the argument of a Mundari reciprocal construction is with two noun phrases and a comitative postposition. Osada also noted that this 'with'-construction is the only possible way to express the participants of a so-called 'possessive' reciprocal, i.e., a reciprocal construction involving an (inalienable) possession. An example is provided in (231) below, referring to the possession of 'hair': one participant ('Soma') is unmarked, whereas the other ('his child') bears the comitative postposition *-lo?*.

(231) Soma ay-a? hon-lo? ub=king
Soma he-POSS child-with hair=3DU-SBJ
la-pa-Tab-ja-n-a. (Mundari)
cut-RECP-cut-INGR-INTR-PRED
'Soma and his child have cut each other's hair.'
(Osada, 2007, p.1583)

While Osada's (2007) observation seems to suggests that the 'with'-construction must be general to verbs bearing the reciprocal infix *-pV-*, the study does not provide data explicitly supporting such a conclusion. Yet, the general availability of the 'with'-construction with 'possessive' reciprocals is indicative of at least some degree of productivity, and this makes it reasonable to dismiss the possibility that this construction is exclusive to lexical reciprocal entries. Importantly, in Mundari there is no identity between NP conjunction (*ad*) and comitative marker (*-lo?*) (Hoffmann, 1903).

Finally, let us consider the case of Turkish. In this language, reciprocity can be expressed either with a pronominal element (*birbiri* 'each other') or through the verbal affix *-(I)ş*. Atlamaz and Öztürk (2023) illustrated that

verbs reciprocalized through the affix *-(I)ş* can undergo the reciprocal 'with'-alternation. This is exemplified in (232) below. In (232a) both participants are encoded as the subject, whereas in (232b) one participant is the syntactic subject and the other is introduced by the comitative *-la*.

(232) a. Deniz ve İlkay bak-ış-tı. (Turkish)
Deniz and İlkay look-RECP-PST
'Deniz and İlkay looked at each other.'

b. Deniz İlkay-la bak-ış-tı.
Deniz İlkay-with look-RECP-PST
'Deniz and İlkay looked at each other.'

(Atlamaz and Öztürk, 2023, p.3)

Verbal reciprocalization through the morpheme *-(I)ş* appears to be idyosyncratic in Turkish, and not available with just any verb. Atlamaz and Öztürk (2023) identified aspectual properties that constitute restrictions on the availability of reciprocalization through verbal morphology. Yet, this strategy does not (necessarily) corresponds with lexical reciprocity. First, (at least some) lexical reciprocals are realized with zero morphology in Turkish. Secondly, the list of verbs that can undergo verbal reciprocalization provided by Atlamaz and Öztürk (2023) is rather extensive, and it includes predicates whose meanings do not typically corresponds to 'naturally reciprocal' events (e.g. 'pay', 'smell' or 'push'). Thus, the reciprocal 'with'-construction seems possible with grammatical reciprocals in Turkish, although there is no formal identity between NP conjunction (*ve* in (232a) above) and comitative (*-la* in (232b) above).

In conclusion, a treatment of the reciprocal 'with-'alternation relying on the identity between 'with' and 'and' cannot capture the instances presented above for Malagasy, Mundari or Turkish. Moreover, even in languages with a coordination/comitative polysemy, the reciprocal 'with'-construction is restricted to verbal reciprocals. An indicative case is represented by Japanese.

Japanese has two productive strategies to derive reciprocity from transitive predicates (Tatsumi, 2017): a verbal strategy (with the affix *-aw-*) and a nominal strategy (with *otagai* used as an object noun phrase). The verbal strategy can freely appear in the reciprocal 'with'-construction, as exemplified in (233) below. By contrast, the 'with'-construction is unacceptable with *otagai*, as shown in (234).

(233) a. John-to Mary-ga kinoo home-at-ta. (Japanese)
John-and Mary-NOM yesterday praise-RECP-PST
'John and Mary praised each other yesterday.'

b. John-ga kinoo Mary-to home-at-ta.
John-NOM yesterday Mary-with praise-RECP-PST
'John and Mary praised each other yesterday.'

(Tatsumi, 2017, p.536)

(234) * Taroo wa Akiko-to otagai-o aisite-ita.
Taroo TOP Akiko-with RECP-ACC love-PST
(Alpatov and Nedjalkov 2007, p.1070, my glosses)

Japanese differs from Turkish in that it does express NP coordination and comitative with the same form: both are realized as *to* (Martin, 1975). However, just like Turkish, Japanese productively allows the reciprocal 'with'-construction with verbal reciprocals, but not with the pronominal reciprocal strategy.

These data suggest that the 'and'/'with' polysemy is not a necessary condition for the availability of the reciprocal 'with'-construction (as shown by Malagasy, Mundari or Turkish), nor is it a sufficient condition for the general availability of the 'with'-construction in a given language (as shown by the restriction to verbal reciprocals in Japanese). What emerges from these data is that across different languages, the 'with'-alternation is restricted to reciprocal strategies that involve verbal morphology, irrespective of the presence of an 'and'/with' polysemy. It should be stressed that while the reviewed data suggest that the 'with'-construction consistently appears with verbal reciprocals, there are no grounds to generalize that the 'with'-construction would be possible with all verbal reciprocals cross-linguistically.

The underlying reasons for this restriction and of its theoretical implications remain open questions. While this generalization is purely descriptive, it suggests that the sources of the productivity of the 'with'-alternation in some languages is the verbal nature of the reciprocal operation. A detailed analysis of this connection must be deferred to future work.

5 The 'with'-construction with lexical reciprocals

The languages examined in this chapter express grammatical reciprocity using verbal morphology, and systematically allow the reciprocal 'with'-alternation with this strategy. However, there are language where only lexical reciprocals are associated with (zero or overt) verbal morphology, as opposed to the pronominal elements employed by the productive grammatical strategy. In these languages, only lexical reciprocals can undergo the 'with'-alternation. This is the case in several languages, including English, Dutch, Hungarian (Rákosi, 2008), Hebrew (Siloni, 2012) or Greek (Dimitriadis, 2008b).

Examples from Hebrew and Greek are reported below in (235) and (236), respectively. In these languages, lexical reciprocals may be realized in the *hitpael* template (235a) or with non-active morphology (236a), and they can appear in the reciprocal 'with'-construction. In both languages, by contrast, the productive grammatical strategy involves pronominal elements and it disallows the 'with'-construction (235b)-(236b).

(235) a. ha-yeladim hitnašku im ha-yeladot. (Hebrew)
the-boys kiss.PST.RECP with the-girls
'The boys kissed with the girls.'
(Siloni, 2012, p.297)

b. * ha-yeladim nišku exad et ha-šeni im ha-yeladot.
the-boys kiss.PST each other with the-girls

(236) a. O Yanis filithike me ti Maria. (Greek)
the John kiss.NACT.PST.3SG with the Maria
'John and Maria kissed.'

b. * O Yanis filise o enas ton alo me ti Maria.
the John kiss.PST.3SG the one the other with the Maria
(Dimitriadis, 2004, pp.1,2)

Drawing from the picture that emerged throughout the chapter, we may presume that the verbs reported in (235a) and (236a) do not undergo the reciprocal 'with'-alternation solely because of their status as lexical reciprocal entries, but rather because they are marked by verbal morphology (as opposed to reciprocal pronouns). Due to the correspondence between lexical reciprocal

verbs and verbal morphology, in these languages the 'with'-construction necessarily receives the interpretation typical of lexical reciprocals, as observed by Dimitriadis (2008b). Notably, the clauses in (235a)-(236a) above refer to mutual, collective kisses.

These observations also apply to Romance, although lexical and grammatical reciprocals often have an identical surface realization. Let us consider the examples from Italian below. The sentences in (237a) and (238a) have an identical form: they include a verb accompanied by *se*. Yet, in Chapter 2 I motivated a characterization of *baciare* 'kiss' as having two entries: a lexical reciprocal entry, leading to the interpretation in (237ai), and a transitive entry, whose reciprocal interpretation is in (237aii). By contrast, I characterized *ringraziare* 'thank' as unambiguously transitive, hence only allowing grammatical reciprocity. This characterization was supported by the 'with'-construction as one of the distinctive properties of lexical reciprocals. As we saw, lexical reciprocals like *baciare* allow the reciprocal 'with'-construction, as shown in (237b) below, whereas grammatical reciprocals such as *ringraziare* lead to ungrammaticality in this construction, as in (238b).

(237) a. Mary e Lisa si baciano. (Italian)
Mary and Lisa SE kiss.PRS.3PL
i. 'Mary and Lisa kiss.'
ii. 'Mary and Lisa kiss each other.'

b. Mary si bacia con Lisa.
Mary SE kiss.PRS.3SG with Lisa
'Mary kisses with Lisa.'

(238) a. Mary e Lisa si ringraziano. (Italian)
Mary and Lisa SE thank.PRS.3PL
'Mary and Lisa thank each other.'

b. * Maria si è ringraziata con Lisa.
Mary SE be.AUX.3SG thank.PTCP with Lisa.

I have argued that lexical reciprocals such as 'kiss' have an intrinsic reciprocal reading: reciprocity is due to the verb's entry and *se* does not directly contribute to the reciprocal interpretation. By contrast, in clauses with grammatical reciprocals like 'thank', *se* licenses a covert reciprocal operator that is responsible for deriving the reciprocal interpretation. Under this assumption, only lexical reciprocal predicates express reciprocity at the verbal level, and the availability

of the 'with'-construction in (238) does not diverge from the pattern emerged throughout the present chapter. While the reciprocal 'with'-alternation is not *per se* indicative of lexical reciprocal entries, it can still be helpful for identifying lexical reciprocals in languages like Italian, where they correspond to predicate that express reciprocity at the level of the verb. Note that in Chapter 2 I argued that the reciprocal interpretation involving the transitive alternate of 'kiss' (associated to the reading in (237aii) above), is derived through (covert) reciprocal operators and, like all grammatical reciprocals, it cannot appear in the 'with'-construction. As a result, the 'with'-construction in Romance unambiguously receives the pseudo-reciprocal reading of the lexical intransitive. Just like the Hebrew or Greek examples above, the Italian clause in (237b) supports a mutual, collective kiss; unlike (237a), it does not align with an interpretation where Mary and Lisa each kisses the other on the forehead in different moments.

As seen in §3, the situation is different in Swahili. In this language, both lexical and grammatical reciprocals are marked with verbal morphology, and both strategies can appear in the 'with'-construction. In this language, a verb like *pigana*, which is ambiguous between a lexical entry ('fight') and a grammatical entry ('hit each other'), has access to both readings in the 'with'-construction: both the pseudo-reciprocal and the plain reciprocal interpretations characteristic of these two strategies are accessible. Therefore, the 'with'-construction is necessarily associated with pseudo-reciprocal interpretations in languages where lexical reciprocals are the only predicates allowed in the 'with'-construction, but not in languages like Swahili, where the construction extends to grammatical reciprocals.

The discriminating characteristic of predicates that appear in the 'with'-construction cross-linguistically seems to be the expression of reciprocity at verbal level: either through verbal affixes, dedicated templates or voice markers, or zero morphology. This construction may be a useful diagnostics for lexical reciprocals in languages like Romance, but it is not a cross-linguistic prerogative of lexical reciprocals, and not by default associated with pseudo-reciprocal interpretation of such intransitives.

6 Concluding remarks

In Swahili, all reciprocal verbs marked by the affix *-an* can undergo the reciprocal 'with'-alternation. In this chapter, we have seen that this is the case for both lexical and grammatical reciprocal predicates, and that the 'with'-construction may receive a pseudo-reciprocal interpretation (associated to lexical reciprocity) or a plain reciprocal interpretation (associated to grammatical reciprocity), just like 'ordinary' reciprocal constructions with a conjoined subject.

We have seen that Swahili does not constitute a unique case, but that different unrelated languages allow the 'with'-construction with both lexical and grammatical reciprocals. I generalized that, cross-linguistically, the reciprocal 'with'-construction is not a prerogative of lexical reciprocal predicates, nor of languages that exhibit a polysemy between NP conjunction and comitative marker.

Instead, it emerged that across different languages the 'with'- construction is allowed with predicates that express reciprocity at the verbal level, through verbal morphemes, dedicated voice or with lexical entries. The reciprocal 'with'-construction is restricted to lexical reciprocity in languages like English, Greek or Hebrew, where only lexical reciprocals are associated with verbal markers, whereas grammatical reciprocals necessarily involve pronominal elements. In these languages, the 'with'-construction necessarily receives a 'single-event' (or pseudo-reciprocal) interpretation, as observed by Dimitriadis (2008b).

The overview presented in this chapter was descriptive and comparative in nature. It opens questions that further studies may address, particularly on the reasons behind the restrictions of the reciprocal 'with'-alternation cross-linguistically. By bringing together data and observations from various languages, this chapter serves as a starting point for investigating these questions in the future.

CHAPTER 6

Conclusions

This dissertation has focused on the characterization of lexical reciprocal entries, in contrast to grammatical valence-reducing operations, particularly in languages where only one reciprocal form is available on the surface. The exploration aimed at analyzing properties that are characteristic of lexical reciprocal predicates, while offering a broader comparative perspective to determine whether these features are inherent to this class of verbs cross-linguistically. We also discussed the characterization of predicates with a lexical reflexive entry, and brought new evidence that bears on the observed polysemy between reflexivity and reciprocity in languages that do not overtly differentiate between the two.

In the course of the investigation new questions have also emerged, opening up the way for further studies. In what follows, let us take stock of the central questions of this thesis, of the answers I provided, and of the new questions that are left for further research.

One central aim of this dissertation was to study lexical reciprocal predicates in languages where they cannot be overtly identified. In **Chapter 2**, this line of investigation was pursued with respect to Romance languages, where the clitic *se* generally accompanies reciprocal interpretations, without an overt differentiation between lexical and grammatical processes. I characterized as lexical

reciprocals the predicates that, in certain constructions that differ per language, receive a reciprocal interpretation without *se* and without other reciprocity elements. This characterization was independently supported by a set of properties that are found to hold with the proposed lexical reciprocals, but not with grammatical reciprocals. I argued that the lexical strategy and the grammatical strategy have a different underlying composition, but I provided a unified analysis of the *se* element. I suggested that *se* is a marker of reflexive/reciprocal interpretations. With lexical reciprocals, it does not compositionally contribute to the collective interpretation, which stems from the intransitive entry of the verb. With grammatical reciprocals, *se* has the same denotation, but it is also required to license the covert operators that lead to reflexive or reciprocal interpretations. In both cases, *se* was analyzed as in identity function.

We saw that the constructions that allow the omission of *se* differ among the Romance languages taken into consideration, and I have left this variation as an independent question. Future studies would profit from further investigating the syntactic constraints on the appearance of *se* across different constructions and languages. Chapter 2 also leaves room for further exploration of the discussed properties in other languages, especially those that employ comparable clitic forms to the Romance languages.

In **Chapter 3** I have drawn a parallel distinction between lexical and grammatical processes with respect to reflexivity. In Romance, the *se*-constructions that are associated to lexical and grammatical reciprocity are also associated to lexical and grammatical reflexivity. Chapter 3 studied Romance verbs with a lexical reflexive entry, relying on a characterization similar to that of reciprocals, and explored the inherent interpretation of these predicates. Reflexivity was further studied in relation to the polysemy between reflexivity and reciprocity: this chapter substantiated the proposal, advanced in Chapter 2, that grammatical reflexivity and grammatical reciprocity stem from two distinct operators. Focusing primarily on Italian and Brazilian Portuguese, the proposal was supported by the observation that reflexivity and reciprocity are not concurrently accessible. Plural *se*-clause with transitive verbs do not allow 'mixed' interpretations, i.e. interpretations that are partially reflexive and partially reciprocal. We observed that such 'mixed' readings are, however, readily accessible with lexical reflexives. I have argued that this is a by-product of their intrinsic meaning, and we observed the same for similar intransitives in other languages. This

shed light on the interpretation of lexical reflexives in different languages, but it also demonstrated that their licensed 'mixed' readings are independent of the ambiguity between reflexivity and reciprocity.

The findings of Chapter 3 are in contrast with proposals that have been advanced in the literature for other languages, where reflexive/ reciprocal constructions are considered underspecified based on the possibility of allowing a 'mixed' reflexive and reciprocal reading. This divergence raises the question of whether lexical reflexivity may also play a role in the acceptability of 'mixed' readings in such languages, but it also opens up the possibility of exploring the ambiguity or underspecification between reflexivity and reciprocity as subject to cross-linguistic variation.

In **Chapter 4**, the analytical premises of Chapters 2 & 3 were implemented for another group of languages that do not overtly distinguish lexical from grammatical reciprocity. The chapter focused on the Bantu languages, with a special attention to Swahili, where all predicates that receive a reciprocal interpretation bear the morpheme -*an*. I characterized lexical reciprocals relying on a set of properties; both semantic (the availability of *pseudo-reciprocal* interpretations), syntactic (the licensing of singular subjects), and morphological (restrictions on the combination of -*an* with other verbal extensions). I argued that while -*an* works as an operator of grammatical reciprocity, with lexical reciprocals it is a marker that became lexicalized as part of the verb stem, a process that has been attested in other Bantu languages, and that was briefly discussed for Kituba in the related Appendix B.

Focusing exclusively on reciprocity, the chapter did not study reflexivity, and left room for an exploration on the possible lexicalized nature of reflexive entries. Given that different syntactic analyses were proposed in the literature for reflexive and reciprocal morphemes in Bantu, lexical reflexives may be manifested in different ways as compared to reciprocals. The chapter also left room for questions on the generalizable nature of the analysis, and whether it can extend to more Bantu languages, or to other languages that express reciprocity through verbal extensions. It remains to be determined whether the properties that characterize Bantu lexicalized reciprocals are to be found in other languages with only one reciprocal verbal morpheme.

The pictures that emerged from Chapters 2 & 4 revealed a semantic uniformity on the interpretations of lexical reciprocal predicates in Romance and

Bantu, as well as some structural contrasts. One significant contrast between Romance and Bantu concerns the reciprocal 'with'-alternation: it is exclusive to lexical reciprocals in Romance, but it is accessible with grammatical reciprocals in Swahili (and most Bantu languages). **Chapter 5** aimed at providing a descriptive overview of the availability of the reciprocal 'with'-construction in different languages. We have seen that, similar to Swahili, the 'with'-construction is attested with grammatical reciprocals across different unrelated languages that productively express reciprocity through verbal morphology. However, unlike Swahili, some of these languages employ distinct forms for NP conjunction and comitative arguments. This revealed the limitations of analyzing the reciprocal 'with'-construction in relation to the 'with'/and' polysemy, or solely as a property of lexical reciprocal entries. Instead, it emerged that the common characteristic of predicates that undergo the reciprocal 'with'-alternation is the expression of reciprocity through verbal morphology. The chapter raised questions regarding the motivations of this constraint, and it disentangled the distribution of the reciprocal 'with'-construction from the notion of lexical reciprocity. The descriptive overview lays empirical foundations for a theoretical study of the underlying properties of this constructions, and of its restriction to verbal reciprocals.

APPENDIX A

Romance lexical reciprocal verbs

This Appendix contains examples of lexical reciprocal verbs with a transitive alternate in Brazilian Portuguese (§1), Catalan (§2), Italian (§3) and Spanish (§4) and it illustrates the properties discussed in Chapter 2. For each verb entry, I provide an example of a finite clause, a causative, an absolute clause (for Catalan and Spanish), a 'with'-construction and singular group NP.

Note that only reciprocal interpretations have been included in the free translations. Reflexive or passive interpretations, although accessible in some of the constructions (see Chapter 2), have not been included.

The element *se* is included when necessary for the reciprocal interpretation of the given construction. It is included in a parenthesis when the given construction may receive a reciprocal reading with and without *se*.

For brevity, Brazilian Portuguese, Catalan and Spanish causatives are only provided in their variant without *se* (unless this element is necessary for reciprocal interpretations, as in a couple of BP idiosyncratic cases).

1 Brazilian Portuguese

verb	**finite clause**	**causative**	**'with'**	**group NP**
abraçar 'hug'	*X e Y (se) abraçaram* 'X and Y hugged (each other)'	*Eu fiz X e Y abraçarem* 'I caused X and Y to hug'	*X (se) abraçou com Y* 'X and Y hugged'	*O time (se) abraçou* 'The team hugged'
beijar 'kiss'	*X e Y (se) beijaram* 'X and Y kissed (each other)'	*Eu fiz X e Y beijarem* 'I caused X and Y to kiss'	*?X (se) beijou com Y* 'X kissed with Y'	*O casal se beijou* 'The couple kissed'
casar 'marry'	*X e Y (se) casaram* 'X and Y got married'	*Eu fiz X e Y casarem* 'I caused X and Y to get married'	*X (se) casou com Y* 'X got married with Y'	*O casal (se) casou* 'The couple got married'
consultar 'consult/confer'	*X e Y se consultam* 'X and Y consult each other/confer'	*Eu fiz X e Y se consultarem* 'I caused X and Y to consult each other/confer'	*X (se) consulta com Y* 'X confers with Y'	*O time se consulta* 'The team confers'
cumprimentar 'greet'	*X e Y se cumprimentaram* 'X and Y greeted each other'	*Eu fiz X e Y cumprimentarem* 'I caused X and Y to greet each other'	*X (se) cumprimentou com Y* 'X and Y greeted each other'	*O time se cumprimentou* 'The members of the team greeted each other'

encontrar 'meet'	*X e Y se encontram* 'X and Y meet'	*Eu fiz X e Y se encontrarem* 'I caused X and Y to meet'	*X (se) encontrou com Y* 'X met with Y'	*O time se encontrou* 'The team met'
namorar 'date, be partners'	*X e Y (se) namoram* 'X and Y are dating'	*Eu fiz X e Y namorarem* 'I caused X and Y to date'	*X se namora com Y* 'X and Y are dating'	*O par (se) namora* 'The pair is dating'

2 Catalan

verb	**finite clause**	**causative**	**absolute**	**'with'**	**group NP**
abraçar 'hug'	*X i Y s' abraçen* 'X and Y hug (each other)'	*He fet abraçar a X i Y* 'I caused X and Y to hug'	*Abraçats X i Y van sortir* 'After hugging, X and Y left'	*X s'abraça amb Y* 'X hugs with Y'	*L'equip s'abraça* 'The team hugs'
casar 'marry'	*X e Y es casen* 'X and Y get married'	*He fet casar a X i Y* 'I caused X and Y to get married'	*Casats X i Y van sortir* 'After getting married, X and Y left'	*X es casa amb Y* 'X gets married with Y'	*La parella es casa* 'The couple gets married'

deixar 'leave/break up'	*X i Y es deixen* 'X and Y leave each other/break up'	*He fet deixar a X i Y* 'I caused X and Y to break up'	*Deixats X i Y van sortir* 'After breaking up, X and Y left'	*X es deixa amb Y* 'X breaks up with Y'	*La parella es deixa* 'The couple breaks up'
petonejar 'kiss'	*X i Y es petonejen* 'X and Y kiss'	*He fet petonejar a X i Y* 'I caused X and Y to kiss'	*Petonejats X i Y van sortir* 'After kissing, X and Y left'	*X es petoneja amb Y* 'X kisses with Y'	*La parella es petoneja* 'The couple kisses'
topar 'run into, meet accidentally'	*X i Y es topen* 'X and Y run into each other'	*?He fet topar a X i Y* 'I caused X and Y to run into each other'	*?Topats X i Y van sortir* 'After running into each other, X and Y left'	*X es topa amb Y* 'X and Y run into each other'	*L'equip es topa* 'The members of the run into each other'
trobar 'find/meet'	*X i Y es troben* 'X and Y find each other/meet'	*He fet trobar a X i Y* 'I caused X and Y to meet'	*?Trobats X i Y salieron* 'After meeting, X and Y left'	*X es troba amb Y* 'X meets with Y'	*L'equip es troba* 'The team gathers'

3 Italian

verb	**finite clause**	**causative**	**'with'**	**group NP**
abbracciare 'hug'	*X e Y si abbracciano* 'X and Y hug (each other)'	*Ho fatto abbracciare X e Y* 'I caused X and Y to hug'	*X si abbraccia con Y* 'X and Y hug'	*La squadra si abbraccia* 'The team hugs'
baciare 'kiss'	*X e Y si baciano* 'X and Y kiss (each other)'	*Ho fatto baciare X e Y* 'I caused X and Y to kiss'	*X si bacia con Y* 'X and Y kiss'	*La coppia si sta baciando* 'The couple is kissing'
coccolare 'cuddle'	*X e Y si coccolano* 'X and Y cuddle'	*Ho fatto coccolare X e Y* 'I caused X and Y to cuddle'	*X si coccola con Y* 'X cuddles with Y'	*La coppia si coccola* 'The couple cuddles'
conoscere 'know (of)'	*X e Y si conoscono* 'X and Y know (of) each other'	*Ho fatto conoscere X e Y* 'I introduced X and Y'	*?X si conosce con Y* 'X and Y know each other'	*?La famiglia si conosce bene* 'The members of the family know each other well'
consultare 'consult/confer'	*X e Y si consultano* 'X and Y consult each other/confer'	*Ho fatto consultare X e Y* 'I caused X and Y to confer'	*X si consulta con Y* 'X confers with Y'	*La squadra si consulta* 'The team confers'

frequentare 'date'	*X e Y si frequentano* 'X and Y date'	*Ho fatto frequentare X e Y* 'I caused X and Y to date'	*X si frequenta con Y* 'X is dating with Y'	*La coppia si frequenta* 'The couple is dating'
incontrare 'meet'	*X e Y si incontrano* 'X and Y meet'	*Ho fatto incontrare X e Y* 'I caused X and Y to meet'	*X si incontra con Y* 'X meets with Y'	*La squadra si incontra* 'The team gathers'
incrociare 'cross/run into, meet accidentally'	*X e Y si sono incrociati* 'X and Y crossed each other/ran into each other'	*Ho fatto incrociare X e Y* 'I caused X and Y to run into each other'	*X si è incrociato con Y* 'X and Y ran into each other'	*La famiglia si è incrociata per caso* 'The members of the family ran into each other accidentally'
lasciare 'leave/break up'	*X e Y si lasciano* 'X and Y leave each other/break up'	*Ho fatto lasciare X e Y* 'I caused X and Y to break up'	*X si è lasciato con Y* 'X broke up with Y'	*La coppia si è lasciata* 'The couple broke up'
sposare 'marry'	*X e Y si sposano* 'X and Y get married'	*Ho fatto sposare X e Y* 'I caused X and Y to get married'	*X si sposa con Y* 'X gets married with Y'	*La coppia si sposa* 'The couple gets married'
trovare 'find/meet'	*X e Y si trovano* 'X and Y find each other/meet'	*Ho fatto trovare X e Y* 'I caused X and Y to meet'	*X si è trovato con Y* 'X met with Y'	*La squadra si trova ogni settimana* 'The team gathers every week'

vedere 'see/meet'	*X e Y si vedono* 'X and Y see each other/meet'	*?Ho fatto vedere X e Y* 'I caused X and Y to meet'	*X si vede con Y* 'X meets with Y'	*La famiglia si vede ogni settimana* 'The family meets every week'

4 Spanish

verb	**finite clause**	**causative**	**absolute**	**'with'**	**group NP**
abrazar 'hug'	*X y X se abrazan* 'X and Y hug (each other)'	*Hice abrazar a X y Y* 'I caused X and Y to hug'	*Abrazados X y Y salieron* 'After hugging, X and Y left'	*X se abraza con Y* 'X and Y hug'	*El equipo se abraza* 'The team hugs'
acurrucar 'cuddle'	*X y X se acurrucan* 'X and Y cuddle'	*Hice acurrucar a X y Y* 'I caused X and Y to cuddle'	*Acurrucados X y Y salieron* 'After cuddling, X and Y left'	*X se acurruca con Y* 'X and Y cuddle'	*La pareja se acurruca* 'The couple cuddles'
besar 'kiss'	*X y Y se besan* 'X and Y kiss (each other)'	*Hice besar a X y Y* 'I caused X and Y to kiss'	*?Besados X y Y salieron* 'After kissing, X and Y left'	*X se besa con Y* 'X kisses with Y'	*La pareja se besa* 'The couple kisses'

casar 'marry'	*X y Y se casan* 'X and Y get married'	*Hice casar a X y Y* 'I caused X and Y to get married'	*Casados X y Y salieron* 'After getting married, X and Y left'	*X se casa con Y* 'X gets married with Y'	*La pareja se casa* 'The couple gets married'
consultar 'consult/confer'	*X y Y se consultan* 'X and Y consult each other/confer'	*Hice consultar a X y Y* 'I caused X and Y to confer'	*?Consultados X y Y salieron* 'After conferring, X and Y left'	*X se consulta con Y* 'X confers with Y'	*El equipo se consulta* 'The team confers'
cruzar 'cross/run into, meet accidentally'	*X y Y se cruzaron* 'X and Y crossed each other/ran into each other'	*Hice cruzar a X y Y* 'I caused X and Y to run into each other'	*?Cruzados X y Y salieron* 'After running into each other, X and Y left'	*X se cruzó con Y* 'X and Y ran into each other'	*La familia se cruzó por casualidad* 'The members of the family ran into each other accidentally'
dejar 'leave/break up'	*X y Y se dejaron* 'X and Y left each other/broke up'	*Hice dejar a X y Y* 'I caused X and Y to break up'	*Dejados X y Y salieron* 'After breaking up, X and Y left'	*X se dejó con Y* 'X broke up with Y'	*La pareja se dejó* 'The couple broke up'

encontrar 'find/meet'	*X y Y se encuentran* 'X and Y find each other/meet'	*Hice encontrar a X y Y* 'I caused X and Y to meet'	*Encontrados X y Y salieron* 'After meeting, X and Y left'	*X se encuentra con Y* 'X meets with Y'	*El equipo se encuentra* 'The team meets'

APPENDIX B

Reciprocal forms in Kituba

Chapter 4 (§3) introduced that in several languages of the Kikongo Language Cluster, there are two verbal affixes associated with reciprocal interpretations: a simplex form (*-an*) and a complex form (which differs across languages, e.g., *-asan*, *-afan*, *-azyan*). With a quantitative study, Dom et al. (2016a) revealed a general trend: across languages of this cluster, complex forms are generally associated with grammatical reciprocity, whereas simplex forms are often lexicalized middle markers. Based on this generalization, it would be expected that verbs which receive a reciprocal interpretation with the simplex marker *-an* are lexical reciprocals. However, it remains unclear whether this hypothesis would hold, and whether the difference between simplex and complex morphemes can be related to a distinction between lexical and grammatical reciprocal processes. More research is needed to understand the function of these two morphological forms, and the differences between them.

In what follows, I will review the case of Kituba to offer a qualitative perspective on the usages of two different morphemes in this language of the Kikongo cluster.[1] Although this overview aligns with the the foundational

[1]Kituba, also referred to as *Kikongo-Kituba* or *Kikongo ya leta* ('Kikongo of the state'), is spoken and used as a lingua franca in regions of Central Africa encompassing Republic of the Congo, the Democratic Republic of the Congo and Angola. It is considered a Creole language

questions of this dissertation, it is presented as an appendix because it has a limited scope, it draws from a limited data sample and it does not provide overarching generalizations that directly contribute to the main line of the thesis. Nonetheless, this overview introduces new data and preliminary descriptive observations on a topic that is under-researched, serving as a starting point for broader studies on the nature of the two reciprocal forms in this language.

I will show that in Kituba, complex/simplex reciprocal morphemes do not correspond to a distinction between lexical/grammatical processes: both the simplex and the complex forms seem productive, and both can mark verbs with interpretations typical of lexical reciprocal verbs cross-linguistically. However, an emerging difference between these two morphemes is that the complex form seems restricted to reciprocal interpretations, whereas the simplex form may be also associated to other middle-related meanings.

The data presented in this Appendix have been collected through a series of interviews, conducted in French, with a native speaker of Kituba. The informant originates from the Kwilu province (Democratic Republic of the Congo) and was residing in Europe at the time of the interviews.

Two reciprocal morphemes

In Kituba, reflexivity and reciprocity do not share the same form. Reflexivity is expressed by the prefix *di-* (239).[2] By contrast, reciprocity is expressed by a suffix: in (240) the morpheme *-an* denotes a mutual configuration.

(239) Mono ke ku-di-zola.
I PRS INF-REFL-love
'I love myself.'

(240) Bau ke zol-an-a.
they PRS love-RECP-FV
'They love each other.'

Besides *-an*, complex reciprocal forms have been observed in the literature. Fehderau (1962) generalized that the reciprocal voice in Kituba is signalled by the suffix *-ana*. Fehderau also reported the reciprocal voice suffix *-asana*, which is considered an allomorph of *-ana*, with "the additional denotation of 'continuous' " (Mufwene, 1996).

[2]The reflexive morpheme is preceded by *ku-* (Fehderau, 1962, p.78).

(p.70). Nkiene (2011) only presented the affix *-an* with respect to reciprocity, but also discussed the 'extensive' morpheme *-akan*, which indicates the amplification of the action with a "certain degree of contact and reciprocity"(p.213).[3]

Thus, two complex reciprocal morphemes are reported in the literature: *-asana* (Fehderau, 1962) and *-akana* (Nkiene, 2011). It has not been explored how they relate to the simplex form *-an*, or whether they conform to the pattern emerging in the study of Dom et al. (2016a).

The suffix *-akan* is not restricted to Kituba: it is found across languages of the Kikongo Language Cluster (and Bantu more broadly) to convey reciprocity/intensity (Koen Bostoen, p.c.). Nowadays, the suffix *-akan* is considered a reciprocal form alongside *-an* in Kituba, whereas *-asan* is not considered accessible to express reciprocity (Joseph Koni Mulawa, p.c.). As illustrated in (241) below, my informant deems the reciprocal form *-asan* ungrammatical, but accepts the forms *-an* and *-akan* to express reciprocity. The forms in (241a) and (241b) are considered equally acceptable, without any perceived difference in their interpretation.

(241) a. Bau ke zol-an-a.

b. Bau ke zol-akan-a.

c. *Bau ke zol-asan-a.
they PRS love-RECP-FV
'They love each other.'

Differences and similarities between *-an* and *-akan*

Based on the judgment of my informant, I did not persist on the investigation of *-asan*, and I focused solely on the distinction between *-an* and *-akan*. For the most part, there seems not to be a difference in the interpretation of the two morphemes, as in (241a) and (241b) above. A distinction between *-an* and *-akan* only emerged with a handful of predicates.

Below, I will show that a restricted number of predicates receives different interpretations with *-an* or *-akan*: the latter consistently receives reciprocal interpretations, whereas the former can receive other middle-related interpretations.

[3]My own translation from French.

Passive vs reciprocal interpretations

The verb *mona* 'find, see' is transitive: in (242) it takes *bilapi* 'pen' as a direct object. With the morphemes *-an* or *-akan*, the valency of the predicate is reduced (243). With *-an*, this verb can receive two different interpretations with a plural subject: a passive (243ai) or a reciprocal (243aii) interpretation.[4] By contrast, the same predicate with the affix *-akan* is judged as univocally reciprocal (243b).

(242) Mono me mona bilapi.
I PST find pen
'I found the pen.'

(243) a. Bau me mon-an-a.
they PST find-RECP-FV
i. 'They have been found.'
ii. 'They found each other.'

b. Bau me mon-akan-a
they PST find-RECP-FV
'They found each other.'

Lexical reflexive vs reciprocal interpretations

Let us consider the transitive verb *bumba* 'hide' (244). With this predicate, *-an* leads to an interpretation typical of 'naturally reflexive' verbs (Kemmer, 1993): (245a) is consistent with an interpretation by which each individual in the subject was hiding. Such a scenario is not truthfully supported by the morpheme *-akan*: the clause in (245b) requires a reciprocal reading, where each individual in the subject hid the other.

(244) Mono ke bumba bilapi.
I PRS hide pen
'I hide the pen.'

[4]The passive reading also emerges with a singular subject, where the reciprocal reading is unaccessible:

(i) Bilapi me mon-an-a.
Pen PST find-RECP-FV
'The pen was found.'

(245) a. Bau me bumb-an-a.
they PST hide-RECP-FV
'They hid.'
(possible context: playing hide & seek)

b. Bau me bumb-akan-a.
they PST see-RECP-FV
'They hid each other.'
(possible context: Jean hid Pierre in his house; later Pierre hid Jean in his house)

Anticausative vs reciprocal interpretations

The verb *buka* 'break' leads to an anticausative reading with *-an* (246a).[5] By contrast, this verb only gets a reciprocal reading with *-akan-* (246b).

(246) a. Bau me buk-an-a malaku.
they PST break-RECP-FV legs
'They broke their legs.'
(possible context: car accident)

b. Bau me buk-akan-a malaku.
they PST break-RECP-FV legs
'They broke each other's legs.'
(possible context: violent fight)

A similar contrast between anticausative and reciprocal interpretations is found with the verb *kuvila* 'forget' (Table B.1).

[5]In order to get a plain reflexive interpretation, the prefix *di-* must be added. The sentence in (i) below is considered acceptable in a dark scenario where each person intentionally broke their own leg.

(i) Bau me ku-di-buka malaku.
they PST INF-REFL-break legs
'They broke their legs.'

Sociative vs (lexical) reciprocal interpretations

With the transitive verb *dya* 'eat', *-an* leads to a sociative interpretation (247a). By contrast, the corresponding *-akan* form has two possible reciprocal interpretations (247b): it can receive a reciprocal interpretation where the meaning of the transitive stem is preserved ('eat each other' in (247bi)) and a logically distinct reciprocal interpretation ('argue' in (247bii)).

(247) a. Bau ke kudy-an-a.
they PRS eat-RECP-FV
'They eat together.'
(possible context: social dinner)

b. Bau ke kudy-akan-a.
they PRS eat-RECP-FV
i. 'They eat each other.'
(possible context: two snakes eating each other)
ii. 'They argue.'
(possible context: verbal fight)

Compositional and lexicalized reciprocal interpretations

With the verb *pusa* 'push', *-akan* and *-an* lead to reciprocal interpretations that do not preserve the meaning of the transitive stem. As shown in (248) below, the transitive verb 'push' may lead to a reciprocal interpretation where the meaning of the transitive stem is preserved ('push each other' in (248ai)-(248bi)) or a distinct reciprocal meaning ('get close to each other' in (248aii)-(248bii)). These interpretations seem equally accessible with *-an* (248a) and *-akan* (248b).

(248) a. Beto me pus-an-a.
they PST push-RECP-FV
i. 'They pushed each other.'
ii. 'They got close to each other.'

b. Beto me pus-akan-a.
they PST push-RECP-FV
i. 'They pushed each other.'
ii. 'They got close to each other.'

A similar pattern is found with the verbs *kubula* 'hit' and *kulala* 'sleep' (Table B.1).

These contrasts, along with additional ones, are summarized below in Table B.1.

verb	**-*an*** form	**-*akan*** form
kubuka 'to hide, protect'	*kubukana* 'to hide (oneself)'	*kubukakana* to hide each other'
kukumba 'to break sth'	*kukumbana* 'to break'	*kukumbakana* 'to break each other'
kuvila 'to forget sth'	*kuvilana* 'to forget'	*kuvilakana* 'to forget each other'
kudya 'to eat'	*kudyana* 'to eat together'	*kudyakana* 'to eat each other; to argue'
kukaba 'to separate'	*kukabana* 'to break up'	*kukabakana* 'to break up'
kupusa 'to push'	*kupusana* 'to push each other; 'to get closer to each other'	*kupusakana* 'to push each other; 'to get closer to each other'
kubula 'to hit'	*kubulana* 'to collide'	*kubulakana* 'to collide'
kuwa 'to feel, hear'	**kuwana*	*kuwakana* 'to be in good terms'
kunwa 'to drink'	*kunwana* 'to fight'	**kunwakana*

Table B.1: Interpretations of -*an* and -*akan* forms.

Concluding remarks & open questions

Three generalizations emerge from the Kituba data presented above:

(i) the complex morpheme -*asan* (reported in Fehderau 1962) is not accepted by all speakers;

(ii) the complex morpheme -*akan* is associated with reciprocal interpretations (both 'compositional' and 'lexicalized');

(iii) the simplex morpheme -*an* is associated with reciprocal interpretations (both 'compositional' and 'lexicalized'), as well as to other middle-related meanings.

The complex form -*akan* is found with reciprocal verbs that do not preserve the meaning of the transitive verb stem (like 'push','hit' and 'sleep') and that get readings that fall into the interpretation of 'naturally reciprocal' events.

Therefore, it is not safe to generalize that the morpheme *-akan* is restricted to cases of grammatical reciprocity. The simplex form *-an* is productive for reciprocal interpretations, but it also seems to have the broader role of a middle marker, supporting interpretations such as passive or anticausative.

This superficial look at Kituba leads us to discard a treatment of *-an* and *-akan* as allomorphs: the pairs in (243), (245) and (246) have different truth-conditions. Also, we must exclude the hypothesis that the difference between these two morphemes might be neatly attributable to a distinction between lexical and grammatical reciprocity. Both *-an* and *-akan* may receive interpretations that does not preserve the meaning of the transitive entry, as seen in examples such as (248). We have seen in Chapter 2 (§4.2) and in Chapter 4 (§4) that such cases of semantic drift are generally associated with lexical reciprocal entries. Thus, it appears that the complex form *-akan* is a reciprocal morpheme, while the simplex *-an* form is associated with valency-reducing operations more broadly, including, but not limited to, reciprocity.

Several questions remain open and require further exploration. More data and judgments from a larger number of speakers are needed to determine whether there are any semantic differences between *-an* and *-akan* that have not emerged in the limited data sample provided above. Further, more comparative data are necessary to clarify the role of *-akan* and its connection (if any) with the complex reciprocal forms attested in other languages of the Kikongo cluster. Moreover, further research is needed to establish whether the cases of semantic drift identified with *-an* and *-akan* are indeed instances of lexical reciprocity, and how they differ from the grammatical reciprocal strategy. Given that the morphological marking does not constitute a straightforward clue for the identification of lexical reciprocals, it would be a natural next step to investigate whether there are properties that are specific to lexical reciprocals in this languages, and that could be used as a diagnostics to identify predicates from this class. This brief sketch can hopefully provide a starting point to answer these questions in the future, with a broader data sample.

APPENDIX C

Swahili lexical reciprocal verbs

This Appendix contains instances of verbs characterized as lexical reciprocals in Swahili, and it provides examples of their properties discussed in Chapter 4.

For each verb I report a free translation of the reciprocal form and of the corresponding binary entry (if any). For each verb entry, I provide an example of: **(i)** the reciprocal verb embedded under a modal with a singular subject (§5.2.1); **(ii)** the reciprocal verb with a singular overt subject and the habitual TAM marker *hu-* (§5.2.2); **(iii)** the reciprocal verb bearing the applicative morpheme after *-an*, **(iv)** or before *-an* (§5.3.1); **(v)** the reciprocal verb bearing the causative morpheme after *-an*, **(vi)** or before *-an* (§5.3.2).

(1) ***achana* 'break up, divorce'** (binary: *acha* 'leave, abandon')

(i) **modal embedding**: *si-taki ni-ach-an-e* 'I do not want to break up'

(ii) **habitual**: *Laura hu-ach-an-a* 'Laura is always fighting'

(iii) **REC>APPL**: *wa-li-ach-an-i-a* 'they broke up in Kilimanjaro'

(iv) **APPL>REC**: *ku-ach-i-an-a* 'to exchange phone numbers'

(v) **REC>CAUS**: *a-li-ni-ach-an-ish-a na Laura* '(s)he made me break up with Laura'

(vi) **CAUS>REC**: **a-li-wa-ach-ish-an-a*

(2) ***gawana* 'share'** (binary: *gawa* 'distribute')

(i) **modal embedding**: *si-taki ni-gaw-an-e chakula* 'I do not want to share food'
(ii) **habitual**: *Laura hu-gaw-an-a chakula* 'Laura is always sharing food'
(iii) **REC>APPL**: *tu-li-gaw-an-i-a chakula Kilimanjaro* 'we shared food in Kilimanjaro'
(iv) **APPL>REC**: *tu-li-gaw-i-an-a chakula Kilimanjaro* 'we distributed food in Kilimanjaro'
(v) **REC>CAUS**: *ni-li-wa-gaw-an-ish-a chapati* 'I made them share chapati'
(vi) **CAUS>REC**: **ni-li-wa-gaw-ish-an-a*

(3) ***gombana* 'quarrel'** (binary: *gomba* 'argue with')

(i) **modal embedding**: *si-taki ni-gomb-an-e* 'I do not want to quarrel'
(ii) **habitual**: *Laura hu-gomb-an-a* 'Laura is always quarreling'
(iii) **REC>APPL**: *wa-na-gomb-an-i-a mchumba* 'they argue for a lover'
(iv) **APPL>REC**: **wa-na-gomb-i-an-a*
(v) **REC>CAUS**: *a-li-ni-gomb-an-ish-a na Laura* '(s)he made me quarrel with Laura'
(vi) **CAUS>REC**: **a-li-wa-gomb-ish-an-a*

(4) ***gongana* 'collide'** (binary: *gonga* 'crash against')

(i) **modal embedding**: *si-taki ni-gong-an-e* 'I do not want to collide'
(ii) **habitual**: *Laura hu-gong-an-a* 'Laura is always colliding' (e.g., she's a bad driver)
(iii) **REC>APPL**: **wa-li-gong-an-i-a*
(iv) **APPL>REC**: *wa-na-gong-e-an-a* 'they knock at each other's doors'
(v) **REC>CAUS**: *a-li-ni-gong-an-ish-a na Laura* '(s)he made me collide with Laura'
(vi) **CAUS>REC**: **a-li-tu-gong-ish-an-a*

(5) ***jibizana* 'discuss, talk, dialogue'** (**jibiza*)

(i) **modal embedding**: *Laura hu-jibiz-an-a* 'Laura is always discussing'
(ii) **habitual**: *si-taki ni-jibiz-an-e* 'I do not want to discuss'
(iii) **REC>APPL**: *tu-li-jibiz-an-i-a Kilimanjaro* 'we discussed in Kilimanjaro; *tu-li-jibiz-i-an-a mtoto* 'we discussed because of the child'
(iv) **APPL>REC**: *tu-li-jibiz-i-an-a Kilimanjaro* 'we discussed in Kilimanjaro; *tu-li-jibiz-an-i-a mtoto* 'we discussed because of the child'
(v) **REC>CAUS**: **a-li-ni-jibiz-an-ish-a na Laura*
(vi) **CAUS>REC**: **a-li-ni-jibiz-ish-an-a na Laura*

(6) ***pambana* 'fight, be in conflict'** (binary: *pamba* 'decorate')

(i) **modal embedding**: *si-taki ni-pamb-an-e* 'I do not want to fight'
(ii) **habitual**: *Laura hu-pamb-an-a* 'Laura is always fighting'
(iii) **REC>APPL**: *tu-li-pamb-an-i-a maisha* 'we fought for life'
(iv) **APPL>REC**: *wa-li-pamb-i-an-a nyumba* 'they decorated each other (e.g., they put make up on each other) at home'
(v) **REC>CAUS**: *a-li-wa-pamb-an-ish-a watoto* '(s)he made the kids fight'
(vi) **CAUS>REC**: *Mary na Laura wa-na-pamb-ish-an-a* 'Mary and Laura are making each other wear make up'

(7) ***patana* 'agree'** (binary: *pata* 'find')

(i) **modal embedding**: *si-taki ni-pat-an-e* 'I do not want to comply'
(ii) **habitual**: *Laura hu-pat-an-a* 'Laura always agrees'
(iii) **REC>APPL**: **wa-na-pat-an-i-a*
(iv) **APPL>REC**: **wa-na-pat-i-an-a*
(v) **REC>CAUS**: *ni-li-wa-pat-an-ish-a* 'I made them agree'
(vi) **CAUS>REC**: **ni-li-wa-pat-ish-an-a*

(8) ***pigana* 'fight'** (binary: *piga* 'hit')

(i) **modal embedding**: *si-taki ni-pig-an-e* 'I do not want to fight'
(ii) **habitual**: *Laura hu-pig-an-a* 'Laura is always fighting'
(iii) **REC>APPL**: *ku-pig-an-i-a* 'to fight for'
(iv) **APPL>REC**: *ku-pig-i-an-a* 'to call each other'
(v) **REC>CAUS**: *a-li-ni-pig-an-ish-a na Laura* '(s)he caused me to fight with Laura'
(vi) **CAUS>REC**: **a-li-ni-pig-ish-an-a na Laura*

(9) ***shindana* 'compete'** (binary: *shinda* 'defeat')

(i) **modal embedding**: *si-taki ni-shind-an-e* 'I do not want to compete'
(ii) **habitual**: *Laura hu-shind-an-a* 'Laura is always competing'
(iii) **REC>APPL**: *ku-shind-an-i-a* 'to compete for'
(iv) **APPL>REC**: **ku-shind-i-an-a*
(v) **REC>CAUS**: *a-li-ni-shind-an-ish-a na Laura* '(s)he made me compete with Laura'
(vi) **CAUS>REC**: **a-li-wa-shind-ish-an-a*

(10) ***tengana* 'separate, break up'** (binary: *tenga* 'separate, isolate')

(i) **modal embedding**: *si-taki ni-teng-an-e* 'I do not want to break up'

(ii) **habitual**: *?Laura hu-teng-an-a* 'Laura is always breaking up' (e.g., Laura has the tendency to terminate relationships)

(iii) **REC>APPL**: *wa-me-teng-an-i-a wivu* 'they have broken up because of jealousy'; *wa-me-teng-an-i-a Brusseli* 'they have broken up in Brussels'

(iv) **APPL>REC**: **wa-me-teng-i-an-a*

(v) **REC>CAUS**: *a-li-ni-teng-an-ish-a na Laura* 'She caused me to break up with Laura'

(vi) **CAUS>REC**: **ni-li-wa-teng-ish-an-a*

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Samenvatting in het Nederlands[1]

Er zijn twee verschillende strategieën die crosslinguïstisch geassocieerd worden met het uitdrukken van wederkerige (reciproke) betekenissen: de lexicale en de grammaticale strategie.

Lexicale reciprociteit is te wijten aan de inherente betekenis van een predicaat. In het Engels betreft het predicaten zoals *kiss* 'kussen', die leiden tot reciproke interpretaties in hun intransitieve vorm (1a). Deze strategie is niet productief: lexicaal intransitieve predicaten met een wederkerige betekenis vormen een gesloten klasse. Bijvoorbeeld, het transitieve werkwoord *describe* 'beschrijven' staat geen lexicale reciprociteit toe (1b).

(1) a. The girls kissed. (Engels)
De meisjes kussen.PST.3PL
'De meisjes kusten.'

b. * The girls described.
De meisjes beschrijven.PST.3PL

Grammaticale reciprociteit is het proces waarbij een lezing met wederzijdse betrokkenheid wordt afgeleid via een productieve strategie die wordt toegepast op een argument van het werkwoord. In het Engels betreft het pronomina zoals *each other*:

(2) a. The girls kissed each other. (Engels)
De meisjes kussen.PST.3PL elkaar
'De meisjes kusten elkaar.'

[1]I wish to thank Imke Kruitwagen and Joost Zwarts for their precious assistance with the Dutch summary; any remaining errors are mine.

b. The girls described each other.
De meisjes beschrijven.PST.3PL elkaar
'De meisjes beschreven elkaar.'

Lexicale reciprociteit en grammaticale reciprociteit leiden tot verschillende interpretaties. Grammaticale reciprociteit wordt
geïnterpreteerd als verschillende eenrichtingsgebeurtenissen: (2a) kan verwijzen naar meerdere eenrichtingsgebeurtenissen tussen twee deelnemers, bijvoorbeeld een meisje A dat een meisje B op haar wang kust waarna meisje B meisje A op haar hand kust. Daarentegen beschrijft lexicale reciprociteit één collectieve gebeurtenis, die niet altijd kan worden ontleed in eenrichtingsrelaties. De zin in (1a) wordt geïnterpreteerd als één wederzijdse gelijktijdige kus tussen de deelnemers. Ik verwijs naar de interpretatie van lexicale reciprociteit als *pseudo-reciprociteit*.

In het Engels kan het onderscheid tussen lexicale en grammaticale processen ook worden geïdentificeerd voor reflexiviteit. Grammaticale reflexiviteit wordt productief afgeleid met reflexieve voornaamwoorden zoals *herself* 'zichzelf' (3), terwijl lexicale reflexiviteit beperkt is tot een gesloten klasse van predicaten die een reflexieve interpretatie krijgen met nulmorfologie (4).

(3) a. The girl bathed herself. (Engels)
het meisje baden.PST.3SG zichzelf
'Het meisje baadde zichzelf.'

b. The girl described herself.
het meisje beschrijven.PST.3SG zichzelf
'Het meisje beschreef zichzelf.'

(4) a. The girl bathed. (Engels)
het meisje baden.PST.3SG
'Het meisje baadde zich.'

b. * The girl described.
het meisje beschrijven.PST.3SG

Deze dissertatie richt zich op de karakterisering van lexicaal reciproke elementen, in tegenstelling tot grammaticale reciprociteit, met name in talen waar slechts één reciproke vorm beschikbaar is aan de oppervlakte. Het beoogt eigenschappen te analyseren die kenmerkend zijn voor lexicaal reciproke predikaten, terwijl het een breder vergelijkend perspectief biedt om te bepalen of deze kenmerken inherent zijn aan deze klasse van werkwoorden over talen heen.

In **Hoofdstuk 2** bespreek ik de Romaanse talen, waar het onderscheid tussen lexicale en grammaticale reciprociteit niet altijd duidelijk tot uiting komt. In het Italiaans kunnen werkwoorden een reciproke (of reflexieve) interpretatie krijgen met het cliticum *si*, en er is geen duidelijk onderscheid tussen lexicale en grammaticale reciprociteit (of tussen reflexiviteit en reciprociteit zelf):

(5) Le ragazze si sono baciate. (Italiaans)
de meisjes SE AUX kussen.PTCP
'De meisjes hebben (elkaar/zichzelf) gekust.'

Het hoofdstuk onderzoekt het onderscheid tussen lexicale en grammaticale reciproke processen in de Romaanse talen, en de bijdrage van *se* aan elk van deze betekenissen. Ik stel voor dat er Romaanse werkwoorden zijn met een lexicaal reciprook lemma, en dat ze kunnen worden geïdentificeerd op basis van de mogelijkheid om reciprociteit uit te drukken zonder *se* over constructies die verschillen per taal. Als voorbeeld laat ik zien dat in het Braziliaans Portugees (BP) finiete zinnen, een handvol werkwoorden optioneel *se* kunnen weglaten. Met nulmorfologie krijgen ze dezelfde reeks interpretaties als overeenkomstige lexicaal intransitieven in het Engels: (6) duidt op een configuratie waarbij de meisjes betrokken waren bij een wederzijdse kus.

(6) As meninas beijaram. (BP)
de meisjes kussen.PST.3PL
'De meisjes kusten.'

Ik maak de generalisatie dat in Romaanse talen, telkens wanneer een werkwoord een reciproke betekenis vertoont in sommige constructies zonder *se* en zonder andere reciprociteitselementen, dat werkwoord een lexicaal intransitief lemma heeft dat inherent wederkerig is, en de semantische kenmerken heeft van vergelijkbare intransitieven in het Engels. Ik ondersteun dit voorstel door te laten zien dat dergelijke werkwoorden een aantal eigenschappen gemeen hebben met lexicaal reciproken in andere talen: (i) ze hebben een pseudo-reciproke lezing; (ii) ze kunnen verschijnen in de 'met'-constructie, d.w.z. ze kunnen één van de deelnemers aan de reciproke relatie uitdrukken via een comitatieve bepaling; (iii) ze kunnen reciprociteit uitdrukken met enkelvoudige groepsnamen.

Na het verschaffen van een karakterisering van lexicaal reciproken laat ik zien dat ook grammaticale reciprociteit mogelijk is zonder *se* in sommige constructies, zolang er een duidelijk wederkerig element aanwezig is. In het

Braziliaans Portugees kan bijvoorbeeld in combinatie met een pronominaal wederkerig element zoals *uma a outra* 'elkaar', elk overgankelijk werkwoord reciproke configuraties aanduiden zonder *se*:

(7) As meninas descreveram uma a outra. (BP)
de meisjes beschrijven.PST.3PL elkaar
'De meisjes beschreven elkaar.'

Deze gegevens motiveren een analyse waarbij *se* zelf nooit de semantische bron van reciprociteit is: elementen zoals BP *uma a outra* hebben de betekenis van reciproke operatoren, terwijl de reciproke interpretatie van predicaten zoals *abraçar* 'knuffelen' te wijten is aan de inherente betekenis van de intransitieve werkwoordstam. Ik stel voor dat de rol van *se* puur syntactisch is: het is een Voice-hoofd die reflexieve en reciproke predikaten markeert, maar het draagt nooit zelf de betekenis van een reciproke of reflexieve operator. Of *se* verplicht is, hangt af van de syntaxis van de zin, en van de aanwezigheid van andere elementen die reflexieve/reciproke interpretaties markeren (bijv. BP *uma a outra*).

In **Hoofdstuk 3** focus ik op het onderscheid tussen grammaticale reciprociteit en grammaticale reflexiviteit in het Romaans. Het hoofdstuk onderzoekt de vraag of deze betekenissen het resultaat zijn van dezelfde operatie of van twee verschillende – dus of Romaanse *se*-zinnen ongespecificeerd zijn of ambigu zijn tussen reciprociteit en reflexiviteit.

Hoewel een analyse in termen van ongespecificeerdheid is voorgesteld voor Romaanse talen (Cable, 2012), zal ik laten zien dat zo'n benadering niet empirisch adequaat is. Een analyse die *se*-zinnen als ongespecificeerd beschouwt, voorspelt dat ze interpretaties zouden moeten toestaan die deels wederkerig en deels reflexief zijn: bij afwezigheid van een lexicaal onderscheid zouden reciprociteit en reflexiviteit gelijktijdig beschikbaar moeten zijn. Daarmee voorspelt dit type analyse dat *se*-zinnen 'gemengde' reflexief/reciproke interpretaties toestaan: interpretaties waarbij sommige individuen een handeling op elkaar verrichten en anderen op zichzelf, zoals geïllustreerd in Figuur C.1.

Ik laat zien dat in het Italiaans en BP dergelijke 'gemengde' interpretaties algemeen aanvaardbaar zijn met alleen werkwoorden die ik classificeer als lexicaal reflexief, met behulp van vergelijkbare criteria als die worden gebruikt voor reciproke werkwoorden in Hoofdstuk 2.

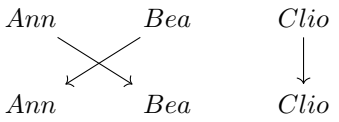

Figure C.1: Mogelijke gemengde reciproke/reflexieve lezing.

Ik betoog dat dit te wijten is aan de intrinsieke lezing van lexicaal reflexieve werkwoorden. Over verschillende talen heen ondersteunen ze situaties waarin er geen strikte identiteit is tussen agens en patiens (Doron and Rappaport Hovav, 2009; Haspelmath, 2023), dus ze kunnen mogelijk gemengde situaties omvatten wanneer ze een meervoudig argument hebben. Het Engelse werkwoord *bathe* in (107) kan bijvoorbeeld een interpretatie krijgen waarbij Ann door iemand anders wordt gewassen, zolang zij daarmee instemde. Deze lexicale semantische eigenschap ondersteunt automatisch gemengde scenario's: een meervoudige zin zoals (108) hieronder wordt als waar beschouwd als Ann en Bea elkaar vrijwillig hebben gewassen, terwijl Clio zichzelf heeft gewassen. Dit soort situaties ondersteunen gemengde scenario's waarbij de deelnemers vrijwillig worden gewassen (door zichzelf of door anderen).

(8) a. The girl bathed. (Engels)
het meisje baden.PST.3SG
'Het meisje baadde zich.'

b. Ann, Bea and Clio bathed.
Ann Bea en Clio badenPST.3PL
'Ann, Bea en Clio baadden zich.'

Ik laat zien dat de beschikbaarheid van gemengde interpretaties in het Romaans onafhankelijk is van de morfologische gelijkenis tussen reflexieve en reciproke strategieën. Deze interpretaties zijn een semantisch epifenomeen van dezelfde specifieke lexicaal reflexieve lemma's die tot gemengde interpretaties leiden in andere talen, ook als die talen, zoals het Engels, een duidelijke ambiguïteit tussen grammaticale reflexiviteit en reciprociteit vertonen.

Ik presenteer gegevens verzameld via vragenlijsten in het Italiaans en Braziliaans Portugees, waaruit blijkt dat moedertaalsprekers gemakkelijk gemengde interpretaties accepteren in *se*-zinnen met lexicaal reflexieven, zoals *lavare* 'wassen' (9), maar minder met gewone transitieve werkwoorden zonder intrinsieke reflexieve lezing, zoals *punire* 'straffen' (10).

(9) Ann, Bea e Clio si lavano. (Italiaans)
Ann, Bea en Clio SE wassen.PRS.3PL
'Ann, Bea en Clio wassen zichzelf/elkaar.'
(context: A. wast zichzelf, B. en C. wassen elkaar)

(10) # Ann, Bea e Clio si puniscono. (Italiaans)
Ann, Bea en Clio SE straffen.PRS.3PL
'Ann, Bea en Clio straffen zichzelf/elkaar.'
(context: A. straft zichzelf, B. en C. straffen elkaar)

Ik concludeer dat grammaticale reflexiviteit en grammaticale reciprociteit te herleiden zijn tot twee verschillende operatoren in het Romaans, waarbij beide mogelijk *se* vereisen in hun codering. Ik betoog dat *se*-zinnen ambigu zijn tussen reflexiviteit en reciprociteit, maar *se* zelf niet lexicaal ambigu is.

In **Hoofdstuk 4** pas ik de analytische uitgangspunten van Hoofdstuk 2 toe op een andere groep talen die niet altijd expliciet onderscheid maakt tussen lexicale en grammaticale reciprociteit. Het hoofdstuk richt zich op de Bantoetalen, met speciale aandacht voor het Swahili, waar het affix *-an* het enige verbale morfeem is dat geassocieerd wordt met reciprociteit. Dit morfeem wordt gebruikt met gewone transitieve werkwoorden waarvan de betekenissen niet overeenkomen met lexicale reciprociteit, zoals in *saidiana* 'elkaar helpen' (11b), maar ook met verbale betekenissen die in verschillende talen vaak geassocieerd worden met lexicale reciprociteit, zoals *pigana* 'vechten' (11b).

(11) a. Wasichana wa-na-saidi-an-a. (Swahili)
meisjes SM.3PL-PRS-helpen-RECP-FV
'De meisjes helpen elkaar.'

b. Wasichana wa-na-pig-an-a.
meisjes SM.3PL-PRS-slaan-RECP-FV
'De meisjes slaan elkaar/vechten.'

Het hoofdstuk karakteriseert Swahili lexicaal reciproke werkwoorden op basis van een reeks eigenschappen die ze onderscheiden van grammaticale reciproke werkwoorden. Ik bekijk (i) pseudo-reciproke interpretaties, (ii) de toelating van enkelvoudige onderwerpen, (iii) beperkingen op de combinatie van *-an* met andere verbale extensies. Ik betoog dat hoewel *-an* werkt als een operator van grammaticale reciprociteit, het met lexicaal reciproke werkwoorden een marker is die lexicaliseerd is als onderdeel van de werkwoordstam, een proces dat is

vastgesteld in andere Bantoetalen, en dat ik kort bespreek voor Kituba in Bijlage B.

Het beeld dat zo ontstaat onthult een semantische uniformiteit in de interpretaties van lexicaal reciproke werkwoorden in het Swahili en in talen die centraal stonden in de vorige hoofdstukken (zoals Romaans of Engels), evenals enkele structurele verschillen. Een significant contrast heeft betrekking op de reciproke 'met'-alternantie: in het Swahili kan elk werkwoord met het morfeem *-an* een reciproke interpretatie krijgen in een zin met een nevengeschikt onderwerp (12a) of in een 'met'-constructie, waarbij een deel van de deelnemers aan de reciproke relatie wordt gecodeerd als het onderwerp en een deel via een comitatief (12b). Dit is mogelijk zowel bij lexicaal als grammaticaal reciproken.

(12) a. Mary na Laura wa-li-pongez-an-a. (Swahili)
Mary en Laura SM.3PL-PST-feliciteren-RECP-FV
'Mary en Laura feliciteerden elkaar.'

b. Mary a-li-pongez-an-a na Laura.
Mary SM.3SG-PST-feliciteren-RECP-FV met Laura
'Mary en Laura feliciteerden elkaar.'
(letterlijk 'Mary feliciteerde elkaar met Laura.')

Daarentegen ondergaan in het Engels of Romaans slechts sommige lexicaal reciproken deze alternantie (13), terwijl grammaticale reciproken niet kunnen voorkomen in de 'met'-constructie (14).

(13) a. Mary and Laura met. (Engels)
Mary en Laura ontmoeten.PST.3PL
'Mary en Laura ontmoetten elkaar.'

b. Mary met with Laura.
Mary ontmoeten.PST.3SG met Laura
'Mary ontmoette Laura.'

(14) a. Mary and Laura described. (Engels)
Mary en Laura beschrijven.PST.3PL

b. Mary described (each other) with Laura.
Mary beschrijven.PST.3SG (elkaar) met Laura

Hoofdstuk 5 bespreekt de eigenschappen van de reciproke 'met'-alternantie in het Swahili, en de verdeling van de 'met'-constructie over talen. Ik betoog dat de 'met'-alternantie niet beperkt is tot de pseudo-reciproke interpretatie

die typisch is voor lexicaal reciproken: Ik laat zien dat in het Swahili reciproke 'met'-constructies dezelfde waarheidscondities hebben als overeenkomstige constructies met een nevengeschikt onderwerp, met als kanttekening dat 'met'-constructies gemakkelijker worden geaccepteerd als de deelnemer gecodeerd als het grammaticale onderwerp actiever is dan de deelnemer geïntroduceerd door 'met'.

In tegenstelling tot eerdere voorstellen laat ik ook zien dat de reciproke 'met'-constructie niet beperkt is tot talen met een polysemie tussen het comitieve voorzetsel 'met' en de NP-conjunctie 'en'. In plaats daarvan bekijk ik gegevens die laten zien dat de alternantie productief is in ongerelateerde talen die grammaticale reciprociteit uitdrukken via verbale morfologie. In talen zoals Swahili, waar grammaticale reciprociteit wordt geassocieerd met verbale morfologie, is de 'met'-constructie mogelijk met alle reciproke predicaten. Echter, in talen waar grammaticale reciprociteit niet wordt afgeleid via verbale morfologie, is de 'met'-alternantie beperkt tot lexicaal intransitieven, waar reciprociteit te wijten is aan de inherente betekenis van de werkwoordstam. Daarom kan deze alternantie waardevol zijn voor de karakterisering van lexicaal reciproke werkwoorden in sommige talen, maar het mag niet verward worden met een taaloverstijgende eigenschap van deze klasse van werkwoorden.

Curriculum Vitae

Giada Palmieri was born in Italy in 1993. She received her BA from the University of Bologna in 2016, majoring in French & English. In 2016, she enrolled in the Research MA in Linguistics of Utrecht University, where she graduated *cum laude* in 2018. That same year, she joined as a PhD candidate the ERC project "Forests and Trees: the formal semantics of collective categorization" at the Institute for Language Sciences, Utrecht University. This manuscript summarizes her research in this project.

Lexical and Grammatical Reciprocity

Perspectives from Romance, Bantu and beyond

In English, reciprocal meanings can be expressed through two distinct strategies: grammatical and lexical. Grammatical reciprocity involves dedicated elements that target a verb's argument and express mutuality, as in the sentence "The girls kissed each other", whereas lexical reciprocity is expressed by an intransitive predicate, as in "The girls kissed".

Unlike English, many languages do not clearly differentiate between these two reciprocal strategies. Reciprocal interpretations are commonly associated with the element "si" in Italian, or with the verbal marker "an" in Swahili, without an apparent distinction between lexical and grammatical processes.

This thesis focuses on the characterization of lexical reciprocity as opposed to grammatical reciprocity, particularly in Romance and Bantu languages where only one reciprocal form is available on the surface. The proposed analysis studies the contribution of reciprocal markers in these languages, and covers a broad cross-linguistic sample of phenomena that are distinctive of lexical reciprocal predicates.

By analyzing central semantic and morphosyntactic properties of reciprocals, this thesis offers a unifying perspective on the characterization of reciprocity across languages, irrespective of whether they show an evident distinction between lexical and grammatical processes.

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