

Can we hug in Italian?
An investigation on lexical and grammatical reciprocity

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Abstract

Cross-linguistically, two different strategies lead to reciprocal meanings: grammatical reciprocity and lexical reciprocity. While the former is a productive strategy that takes place due to the presence of grammatical elements (e.g. “Mary and Lisa hugged each other” in English), the latter is available with a restricted set of predicates that denote a reciprocal configuration on their own, without the addition of any grammatical element (e.g. “Mary and Lisa hugged”). These two strategies do not only differ in their structural realization, but also in their interpretation: grammatical reciprocity may show multiple event readings (e.g. two separate hugs between Mary and Lisa), whereas lexical reciprocity only allows one event readings with a plural agent (e.g. one mutual hug between Mary and Lisa).

Some languages (e.g. English, Hebrew, Dutch) make an overt distinction between lexical and grammatical reciprocity, while in other languages only one strategy is available on the surface (e.g. German, Serbo-Croatian, Romance). Italian is an example of such languages, where, in finite clauses, the only available reciprocal form is realized with the clitic *si*, and does not seem to lend immediate support to either a lexical or a grammatical strategy.

In this thesis, we will investigate the realization of these two strategies in Italian. Using a number of diagnostics, including irreducible event readings, causative constructions, singular group NPs and discontinuous reciprocal constructions, we will identify a considerable number of Italian verbs with a lexical reciprocal entry. In addition, we will propose that grammatical reciprocal meanings are due to a reciprocal operator, while *si* is a syntactic marker of intransitivity that does not carry any reciprocal meaning.

Keywords: *reciprocity, Italian, si*

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Chapter 1

Introduction

The way languages express mutual configurations has been object of several studies over the past few decades (*see* Dalrymple et al., 1998; Nedjalkov, 2007; König & Gast, 2008, a.o.). The different strategies that languages use to encode reciprocal meanings reflect semantic distinctions between different types of reciprocal events. Regarding verbs, there are two strategies that are available cross-linguistically. Consider the English examples in (1):

- (1) a. Mary and Lisa kissed/thanked each other
b. Mary and Lisa kissed/*thanked

While (1a) represents a productive grammatical strategy that is in principle available in English with any transitive verb, (1b) is a lexical strategy where reciprocity is due to the verb's lexical meaning and is only available with a restricted set of verbs. These two reciprocal strategies have different interpretations, let us exemplify it with 'to kiss'. (1a) can either be interpreted with Mary and Lisa being involved in a mutual kiss or with Mary kissing Lisa and Lisa, at a different moment, kissing Mary. By contrast, (1b) can only possibly refer to a mutual kiss between the two participants.

The distinction between these two strategies is overt in a number of languages. It is, for instance, the case of English, as we saw in (1). English allows reciprocity due to the presence of a grammatical element, as in the case of the reciprocal quantifier *each other* in (1a): we will refer to this strategy as *grammatical reciprocity*. In addition, reciprocity might be available in verbs' intransitive entries: *lexical reciprocity*, as in (1b).

However, there are languages where these two strategies are not distinguishable on the surface, as only one construction is available for expressing reciprocal meanings. Romance languages, for instance, make use of the clitic *si/se*, that is required before any transitive verb in order to generate a reciprocal interpretation in finite clauses (2).

- (2) a. Mary e Lisa si sono abbracciate/ringraziate *Italian*
 Mary and Lisa SI are_{aux} hugged/ thanked
- b. La Mary i la Lisa s' han abraçat/ agrait *Catalan*
 the Mary and the Lisa SI have_{aux} hugged/thanked
- c. Mary et Lisa se sont embrassée/ remerciées *French*
 Mary and Lisa SI are_{aux} hugged/ thanked
 'Mary and Lisa hugged/thanked each other'

Given the productivity and the presence of a grammatical element, the sentences in (2) seem easier to ascribe to grammatical reciprocity than to a lexical strategy. This makes it unclear whether lexical reciprocity is available in these languages. Different analyses have previously been provided for the different realization of reciprocity (and other valence-reducing operations such as reflexivity) between languages like English and languages like Romance (see Reinhart & Siloni, 2005; Doron & Rappoport-Hovav, 2009; Labelle, 2008). These accounts make different proposals regarding the status of lexical reciprocity in Romance languages, and they do not provide exhaustive instruments for the identification of this strategy.

In this thesis, we will investigate whether lexical reciprocity is encoded in the Italian lexicon. We will focus on criteria for the identification of lexical reciprocity, and their application to Italian verbs; this will allow us to isolate a set of lexical reciprocals. We will then address grammatical reciprocity and discuss the realization of these two strategies in Italian, as well as the possibility to set them apart. This will necessarily include a brief discussion of *si*, about its role and its contribution to reciprocal meanings.

We will propose that with many Italian verbs lexical reciprocity is encoded in the lexicon and can be revealed in causative constructions, in morpho-syntactically singular group NPs and in the discontinuous reciprocal construction. We will also propose that *si* is a marker of intransitivity (in line with Labelle 2008), and that grammatical reciprocity in Italian is due to a reciprocal operator that can be either covert or overt. Our conclusions will shed some light on the realization of reciprocal meanings in Italian and will provide robust evidence for the identification of lexical reciprocity.

This thesis is structured as follows. In chapter 2 we will provide a general introduction on lexical and grammatical reciprocity, bringing attention to the different interpretations of these two strategies and to structural and semantic differences. In chapter 3 we will focus on Italian,

and we will identify a set of verbs with a lexical reciprocal entry. We will look at causative constructions (§3.1), morpho-syntactically singular group NPs (§3.2) and discontinuous reciprocal constructions (§3.3). Moreover, we will discuss grammatical reciprocity and the adverbial *a vicenda* ‘mutually, in turns’, providing some generalizations on the distribution of the two grammatical strategies (§3.4). Chapter 4 is dedicated to a theoretical explanation for the facts illustrated in chapter 3. Finally, in chapter 5 we will provide some general conclusions.

Chapter 2

Lexical reciprocity vs. grammatical reciprocity

In the literature on plurality (Hoeksema 1983, Link 1983 a.o.), the distinction between *distributive* and *collective* predicates has been traditionally accounted for in terms of semantic number: distributive predicates range over singular entities, while collective predicates over plural entities, as shown in (3) and (4) respectively. *Mixed* predicates, on the other hand, are those predicates that allow both a distributive and a collective reading, as in (5).

- (3) Sue and Dan smiled
smile(d) \wedge smile(s)
- (4) Sue and Dan met
meet(d + s)
- (5) Sue and Dan ate a pizza
 - i. eat_a_pizza(d) \wedge eat_a_pizza(s)
 - ii. eat_a_pizza(d + s)

However, this long-standing generalization is problematic, since the distinction between distributivity and collectivity also depends on the entities the predicate applies to. As (6) shows, while the predicate ‘to meet’ generates a collective reading when combined with a morpho-syntactically singular argument (6a), it allows both a distributive and a collective reading when it appears with the morpho-syntactically plural argument *the committees* (6b).

- (6) a. the committee met
 - i. the members of the committee met

- b. the committees met
 - i. for each committee, the members of the committee met
 - ii. different committees met

The problematic examples in (6), however, are accounted for in the classification proposed by Winter (2002), not between *distributive* and *collective* predicates, but rather between *atom* and *set* predicates, which is based on the following truth-conditional criterion. Given the sentences in (7), a predicate PRED is an atom predicate if (7a) and (7b) have the same truth-conditions (or they are both ungrammatical), while it is classified as a set predicate if the truth conditions of (7a) and (7b) differ (or only one of the sentences is ungrammatical).

Accordingly, the predicates in (8) are classified as atom predicates, since the two sentences are truth-conditionally equivalent. On the other hand, the predicates in (9) are set predicates, because here the sentences differ in grammaticality.

- (7) a. [all the/no/at least two/many] students/committees PRED
 - b. [every/no/more than one/many] student/committee PRED
- (8) a. All the students / Every student slept
 - b. All the students / Every student smiles
 - c. All the students / Every student voted to accept the proposal
- (9) a. All the students met / *Every student met
 - b. All the students like each other / *Every student likes each other
 - c. All the students are similar/ * Every student is similar

In addition, note that some predicates that were traditionally classified as mixed predicates, become atom predicates in Winter's classification. This is for example the case of 'to vote to accept the proposal' in (8c): although this predicate would lead to a collective reading in a sentence with a plural definite subject (e.g. 'The students voted to accept the proposal'), the predeterminer *all* triggers a distributive reading, making the two sentences in (8c) truth-conditionally equivalent. On the other hand, the set predicates 'to meet', 'to like each other' and 'to be similar' in (9) are classified as such because they do allow a collective reading with the predeterminer *all* and a plural predication.

A difference among the set predicates in (9), however, is that not all of them allow a collective reading with singular number. Let us take the VPs ‘to meet’ and ‘to like each other’ and combine them with the morpho-syntactically singular noun *the committee* (10): while ‘to meet’ allows an interpretation according to which the members of the committee met (cf. 6a), ‘to like each other’ leads to ungrammaticality.

- (10) a. The committee has met
b. *The committee likes each other

The possibility to trigger a collective reading with singular number, therefore, is not a common feature of set predicates. If we look at the examples in (11), in fact, we can see that the verb ‘to meet’ allows a collective reading with the morpho-syntactically singular noun *the committee* in its intransitive entry (11a), but not when combined with the pronominal element *each other* (11b). The contrast in (11) is not restricted to ‘meet’, but holds for all the verbs that allow both an intransitive reciprocal entry as well as quantificational reciprocity, and it suggests that it must be the presence of a lexical intransitive entry that allows a collective reading with a singular NP.

- (11) a. The committee has met
b. *The committee has met each other

This generalization will be crucial for the next section. For now, however, let us focus on the entry in (11a). Here, the verb ‘to meet’ expresses a mutual configuration on its own, without any grammatical marking: it is one of the verbs that have been identified by Levin (1993) as undergoing the *reciprocal alternation*, i.e. allowing both a binary (12a) and a collective intransitive form (12b).

- (12) a. Mary met Lisa
b. Mary and Lisa met

Let us now clear up some terminology: from now on, with the term *set predicates*, we will be referring to the classification made by Winter (2002), uncovered by the difference in truth-conditions of the sentences in (7), while with the term *lexical reciprocal predicates* we will refer specifically to the set predicates that undergo the *reciprocal alternation* (12).

Lexical reciprocity will be the focus of this chapter: we will provide an overview of this phenomenon (§2.1) and describe its main features (§2.2). We will also closely look at a couple of relevant semantic features characterizing lexical reciprocal verbs (§2.3) and we will then move to its realization in languages other than English, with a focus on Italian (§2.4).

2.1 Lexical reciprocals and grammatical reciprocals

In an extensive typological work on reciprocal constructions, Haspelmath (2007) divides monoclausal reciprocals (i.e. reciprocal expressions within one clause boundary)¹ into *lexical reciprocals* and *grammatical reciprocals*. While the former express mutual configurations by themselves, without necessary grammatical marking (13), the latter refer to all the constructions that encode a reciprocal reading, just like quantificational reciprocity in English (14).²

(13) Mary and Lisa hugged

(14) Mary and Lisa hugged each other

Lexical reciprocal predicates are claimed to exist in all languages (Haspelmath 2007, p. 2105) and they include verbs (15a), adjectives (15b) and nouns (15c). This work, however, will be restricted to verbal lexical reciprocals and other types of predicates will not be included.

(15) a. Mary and Lisa fought

b. Mary and Lisa are similar

c. Mary and Lisa are friends

In a number of languages - including English, Dutch, Russian, Hebrew and Arabic (Reinhart & Sioni 2005) – lexical reciprocity and grammatical reciprocity can be distinguished on the surface, since they have a different realization in finite clauses. In English – as illustrated in (13) and (14) - lexical reciprocity is realized with zero morphology, while grammatical

¹ Monoclausal reciprocals are opposed to multiclausal reciprocals, which are composed of more than one clause, as in the following example (from Haspelmath 2007, p. 2089):

(i) Aisha pinched Pedro, and Pedro Aisha

² Haspelmath also labeled lexical reciprocals as *allelic predicates*, while Kemmer (1993) previously defined this same set of verbs as *natural reciprocals*.

reciprocity requires the presence of the reciprocal quantifier *each other*. Crucially, while only a limited number of verbs has a lexical reciprocal entry, grammatical reciprocity is potentially available with any transitive verb (16).

- (16) a. * Mary and Lisa thanked/admired/punished
b. Mary and Lisa thanked/ admired/punished each other

Lexical and grammatical reciprocity do not only have a different grammatical realization, but also a different interpretation. Let us exemplify this distinction with the two sentences in (13) and (14). In (13), the intransitive entry of the verb ‘to hug’ suggests that Mary and Lisa must have been involved in a mutual (bidirectional) hug, and it cannot describe two different unidirectional hugs (e.g. one by Lisa and one by Mary, maybe at a different moment). On the other hand, the sentence in (14) can either be interpreted with a bidirectional hug - just like (13) – as well as with different unidirectional hugs taking place, i.e. Mary hugging Lisa and (possibly in a different moment) Lisa hugging Mary.

In order to give a clearer description of the events denoted by lexical reciprocal verbs, let us provide a simple representation of the mutual configurations they describe, in contrast with reciprocal interpretations reducible to unidirectional relations. Let (17) represent multiple unidirectional relations, each of them with a different initiator (once x and once y). This interpretation has been traditionally associated with grammatical reciprocity and is composed of two sub-events, e.g. two different hugs, which can take place either at the same time or in different moments. Lexical reciprocity, on the other hand, cannot be reduced to different non-mutual relations. As (18) shows, here the predicate P denotes a mutual hug involving the pair of entities x and y .

(17) $[R(x,y) \wedge R(y,x)]$

(18) $P(x+y)$

The observation that lexical reciprocals denote a mutual relation instead of different sub-relations has been widely accepted in the literature (Dimitriadis 2004, 2008; Siloni 2012) and linked to the notion of *symmetry*: Dimitriadis (2004) defines as *irreducibly symmetric* all those predicates expressing binary relations where the two participants necessarily have an identical participation.

This property can be exemplified with some lexical reciprocal verbs where the symmetric participation of two agents is required to lead to a collective form. It is the case, for instance, of ‘to meet’, ‘to marry’ or ‘to date’. Here, an interpretation composed of two unidirectional relations (17) and the lexical form we represented in (18) entail each other, as illustrated in (19).

However, *irreducible symmetry* is not a general property of all verbs undergoing the reciprocal alternation. There are some lexical reciprocals, in fact, where the active participation of only one participant is enough to logically lead to a collective form, as in the case of ‘to divorce’, ‘to break up’ or ‘to collide’. In such cases, the lexical reciprocal form does not entail two binary forms (20): if x decided to divorce from y , who is passive and non-collaborative, it would nonetheless be possible to conclude that x and y divorced.

Additionally, a recent experimental work conducted by Kruitwagen, Poortman & Winter (2017) revealed a class of lexical reciprocals where the collective form does not entail two binary forms. Some lexical reciprocal verbs do not necessarily require the equal participation of the agents in the subjects for speakers to accept collective intransitive forms, as long as both participants are ‘mentally involved’ in the action.³ The study identified a set of Dutch predicates where, in intransitive sentences (of the type *A en B knuffelden* ‘A and B hugged’), the symmetric participation of A and B was not required, but preferential. Their results show that in the case of verbs like ‘to hug’, two binary entries do not entail the lexical one – as illustrated in (21).⁴ In fact, from two unidirectional hugs we cannot infer that there was a collective hug: x might have hugged y and y might have hugged x in a different moment, with the two individuals never being involved in a mutual hug.

(19) $P(x+y) \Leftrightarrow [R(x,y) \wedge R(y,x)]$

a. x and y met $\Leftrightarrow x$ met y and y met x

(20) $P(x+y) \not\Leftrightarrow [R(x,y) \wedge R(y,x)]$

a. x and y divorced $\not\Leftrightarrow x$ divorced y and y divorced x

³ In the study, the mental involvement of participants and their collaboratives in the action is referred to as *collective intentionality*, with reference to Searle (1990).

⁴ The other predicates identified by Kruitwagen et al. (2017) along with *knuffelen* ‘to hug’ are: *botsen* ‘to collide’, *praten* ‘to talk’, *vechten* ‘to fight’ and *appen* ‘to send whatsapp messages’.

- (21) $[R(x,y) \wedge R(y,x)] \not\Rightarrow P(x+y)$
 a. x hugged y and y hugged $x \not\Rightarrow x$ and y hugged

Hence, although all lexical reciprocal verbs denote irreducible relations, not all of them are necessarily symmetric in terms of participants' involvement. For this reason, we will not rely on Dimitriadis' notion of *irreducible symmetry*. Instead, we will use the term *irreducibility* to indicate the mutual relations described by lexical reciprocals, which cannot be reduced to multiple unidirectional relations.

In this section, we have seen that lexical and grammatical reciprocals differ on the surface (at least for some languages, including English), on the type of event they denote (irreducible or not) and, for some verbs, lexical and grammatical reciprocity have different truth-conditions. In (§ 2.2), we will look at other features shared by lexical reciprocals, that distinguish them from grammatical reciprocals.

2.2 Lexical reciprocity: the main features

Siloni (2012) provides an extensive analysis of lexical reciprocal verbs and their cross-linguistic realization. The author, using mainly examples from English and Hebrew (where lexical reciprocity is most often realized with the *hitpa'el* template, while grammatical reciprocity requires a reciprocal quantifier) illustrates a number of features that distinguish lexical from grammatical reciprocity. As the author shows, lexical reciprocal verbs - unlike grammatical reciprocals - cannot reciprocalize an Exceptional Case Marking subject (22) and cannot assign accusative case (23).

- (22) a. *Dan ve-Ron hitra'u racim. *Hebrew*
 Dan and-Ron see_{rec} run
 b. Dan ve-Ron ra'u [exad et ha-šeni] racim
 Dan and-Ron saw each other run
 (Siloni 2012, p. 291)

- (23) Dan ve-Dina hitlaxšu (*milot ahava) *Hebrew*
 Dan and-Dina whispered_{rec} words of love
 (Siloni 2012, p. 305)

Furthermore, only lexical reciprocals can be nominalized (24). In addition, (25) shows that the comparative ellipsis construction is only available with grammatical reciprocals: (25a) allows a reading where both Dan and Ron and the children kissed (i) as well as a reading where Dan and Ron kissed each other and the children (ii), while in the lexical reciprocal entry in (25b) only the former interpretation is available.

(24) hitnaškut bney ha-esre *Hebrew*
 kissing_{rec} the teenagers
 ‘the teenagers’ mutual kissing’
 (Siloni 2012, p. 296)

(25) a. Dan ve-Ron nišku [exad et ha-šeni] [yoter me’ašer yeladim axerim] *Hebrew*
 Dan and-Ron kissed each other more than children other
 i. ‘D. and R. kissed each other more than other children kissed each other.’
 ii. ‘D. and R. kissed each other more than they kissed other children.’
 b. Dan ve-Ron hitnašku yoter me’ašer yeladim axerim.
 Dan and-Ron kissed_{rec} more than children other
 ‘Dan and Ron kissed more than other children kissed.’
 (Siloni 2012, p. 272)

Another difference between these two reciprocal strategies is represented by the *discontinuous reciprocal construction*, i.e. a construction where the logical subject of a reciprocal relation is split into two parts: one is encoded as syntactic subject, while the other is in a complement introduced by the preposition *with*. In the literature (Kemmer, 1993; Dimitriadis, 2004; Siloni, 2012) it has been observed that only lexical reciprocal verbs allow this construction (26a), while grammatical reciprocity leads to ungrammaticality (26b). We will refer back to discontinuous reciprocity in the next chapter: given the existence of this construction in different languages, it might be a useful instrument to predict which verbs have a lexical reciprocal entry cross-linguistically.

(26) a. ha-yeladim hitnašku im ha-yeladot *Hebrew*
 the boys kissed_{rec} with the-girls
 (Siloni 2012, p. 297)

- b. *ha-yelasim nisku exad et ha-šeni im ha-yeladot
the boys kiss each other with the girls

Although these features are crucial for the identification of lexical reciprocity on the surface, we will leave most of them aside, since a syntactic investigation of this phenomenon is outside the scope of this work. Instead, in the next sections we will focus our attention on semantic aspects of lexical reciprocity, which are particularly relevant for our work.

2.3 Semantic properties of lexical reciprocity

In this section, we will look at two semantic features of lexical reciprocity that we previously introduced: the fact that these verbs denote irreducible events (§2.3.1) and allow a reciprocal reading with morpho-syntactically singular group NPs (§2.3.2), illustrating these two properties more closely.

2.3.1 Irreducibility

We already saw that lexical reciprocity is a phenomenon that goes hand in hand with the semantic property of *irreducibility*; the events described by lexical reciprocals are irreducible, as they cannot be derived by two unidirectional events.

Let us now illustrate this property in more detail using the verb ‘to hug’ as an example. Imagine a scenario where Mary and Lisa are sleeping, one next to the other. Mary wakes up and decides to hug Lisa while she is asleep, then she falls asleep again. After a few minutes Lisa wakes up and this time she decides to hug Mary, who is sleeping. In this case, there were two distinct unidirectional hugs, but the two women were never involved in a mutual hug. A situation of this type cannot possibly be described by a lexical reciprocal (i.e. with a collective intransitive form like “Mary and Lisa hugged”), but it can, on the other hand, be described by using grammatical reciprocity: it is indeed possible to claim that Mary and Lisa hugged each other. These two possible interpretations reflect the existence of two different predicates: a unary (lexical reciprocal) ‘hug’ and a binary ‘hug’, as summarized below in Table 1.

Table 1

Description of unary and binary ‘to hug’.

verb	type	argument
‘to hug’	unary	set
‘to hug’	binary	atom

Lexical reciprocals are set predicates describing relations between events and plural individuals, therefore they can only denote irreducible events. Grammatical reciprocals, on the other hand, are atom predicates that denote a relation between events and pairs of singular individuals: it follows that the events the two participants are taking part of might either coincide or not. In other words, grammatical reciprocals are binary predicates that get a reciprocal interpretation when combined with a reciprocal quantifier (e.g. *each other* in English) which turns the binary predicate into a unary one. In such a case, the predicate would range over a pair of single entities, allowing two different unidirectional events, one initiated by each individual. The unary set predicate ‘to hug’, on the other hand, ranges directly over a plural set (e.g. ‘Mary and Lisa’): as a result, there can only be one mutual hugging event in which both elements of the set were involved as parts of a collective agent, and it cannot be reduced to different unidirectional sub-events.

To conclude, lexical reciprocals are set predicates ranging over plural entities, while grammatical reciprocals range over (generally pairs of) atoms within a set: lexical reciprocals denote irreducible events, while the events denoted by grammatical reciprocals are necessarily composed of multiple (unidirectional) sub-events.

2.3.2 Reciprocity and singular group NPs

Before moving to the relation between lexical reciprocal verbs and group NPs, let us briefly introduce this latter phenomenon. In the definition given by Barker (1992), a group noun is a noun that can take a plural but not a singular *of*-complement. This definition has been extended by Champollion (2010), which also rules out *pseudopartitives* like ‘box’ (given the possibility of these nouns to appear with plural *of*-complements (e.g. ‘a box of candies’) or nouns taking

of-complements with mass nouns (e.g. ‘a glass of wine’).⁵ Following this definition, *committee*, *couple* and *team* are only some of the group nouns existing in English, as exemplified in (27).

- (27) a. A committee of women/ *woman
b. A couple of women/ *woman
c. A team of women/ *woman

In the literature, it has been proposed that group NPs are not to be analyzed as plural entities, but rather as atomic ones. In fact, although they are constituted of multiple elements (similarly to plural entities), their internal structure is inaccessible to grammar, just like atomic entities: in the literature they have been called *impure atoms* (Link, 1984).

Let us look at the relation between these impure atoms and reciprocal configurations. The lexical reciprocal verb ‘to hug’ can combine with the group NP *the couple* and trigger a collective reading with a singular predication (28), according to which the members of the couple hugged. The same verb, however, leads to ungrammaticality with a grammatical reciprocal configuration, as in (29). The behavior of ‘to hug’ can be generalized to all verbs with a lexical reciprocal entry: while they allow a reciprocal reading with singular group NPs in their intransitive entry, they disallow it if combined with the quantifier *each other*, which necessarily requires a plural argument.⁶

(28) The couple has hugged

(29) * The couple has hugged each other

Given this contrast, we propose that if two entities that are hugging constitute an impure atom, then the impure atom is also considered to be hugging. Crucially, this only happens with

⁵ Champollion (2010) proposes to distinguish two different readings: a measure reading (where only the entities denoted by the *of*-complement are reported) and an individuating reading (where the actual N is reported). He shows that this can account for the difference between ‘a glass of wine’ (ambiguous between reference to the wine contained in the glass or the class itself) and ‘a committee of women’ (whose measure reading is unavailable).

⁶ In British English, grammatical reciprocity is available with group NPs and a plural predication (i). However, this is irrelevant for our discussion since this strategy is unavailable with singular number (ii).

(i) The couple have hugged each other

(ii) *The couple has hugged each other

lexical reciprocity: while the lexicon allows shifting from the groups to the element of this group, i.e. from the impure atom to the entities constituting it, this mechanism is unavailable to grammatical reciprocity, which necessarily requires a plural predication.

Therefore, we conclude that the possibility to generate a collective reading with group NPs is a characteristic that is restricted to lexical reciprocity, connected to the possibility of this strategy to allow singular predication and to range over the entities composing an impure atom. Having now illustrated two critical semantic features of lexical reciprocity, we are in a position to discuss other languages. By looking at the irreducibility of the events described by the lexical reciprocals and their possibility to range over impure atoms, we can use these two properties to identify verbs with a lexical reciprocal entry cross-linguistically.

2.4 When lexical reciprocity is not detectable on the surface: the case of Italian

We have seen that in English lexical reciprocity has a different realization than grammatical reciprocity in finite clauses. The situation, however, differs in other languages - including Romance languages, German, Czech and Serbo-Croatian (Reinhart & Siloni, 2005) - where the two strategies do not seem distinguishable on the surface.

Italian is an example of these latter languages: all transitive verbs require the preverbal clitic *si* in order to generate a reciprocal reading, as exemplified in (30) with the verbs *abbracciare* ‘to hug’ and *ringraziare* ‘to thank’.

- (30) a. Mary e Lisa *(si) sono abbracciate *Italian*
 Mary and Lisa SI are_{aux} hugged
 ‘Mary and Lisa hugged (each other)’
 b. Mary e Lisa *(si) sono ringraziate
 Mary and Lisa SI are_{aux} thanked
 ‘Mary and Lisa thanked each other’

Due to the presence of a grammatical element (i.e. *si*) and the productivity of this construction, the sentences above seem instances of grammatical reciprocity. Given that the constructions in (30) represent the only possible mechanism to generate a reciprocal interpretation in finite clauses with any transitive verb, if they represent an instance of grammatical reciprocity, this would indicate that lexical reciprocity is unavailable in Italian.

However, the lack of a lexical strategy in Italian would not only go against the generalization that lexical reciprocity exists in all languages (Haspelmath, 2007), but it also seems implausible from a semantic perspective. In fact, irreducible events like those we illustrated with the English ‘to hug’ must be accessible to Italian speakers, but it is unclear if and how they are present in the lexicon.

Given these considerations, a couple of questions arise: is lexical reciprocity encoded in the Italian lexicon? If it is, how is it possible to identify verbs with a lexical reciprocal entry, given the availability of only one reciprocal construction in finite clauses? Before addressing these questions in the next chapter, let us have a look at how the contrast between languages like English and Italian has been traditionally accounted for; that is, how the distinction between languages that identify lexical reciprocity on the surface and languages that seem to lack this distinction is explained by the existing literature.

The *lexicon-syntax parameter*, introduced by Reinhart & Siloni (2005), was proposed as an explanation for the cross-linguistic difference in arity-reducing operations, i.e. operations that reduce the number of arguments of a verb.⁷ The authors proposed that these operations take place in the lexicon in some languages (including English, Dutch and Hebrew) and in the syntax in other languages (e.g. Romance, German and Serbo-Croatian). In the so-called ‘syntax languages’, the presence of a syntactic marker (*si* in the case of Italian) is the residue of a *bundling* operation that reduces the accusative case of the verb. This account provides an explanation for the syntactic features of lexical reciprocity that we illustrated in §2.2, and does not exclude the possibility for syntax languages to also allow arity operations in the lexicon; instances of this phenomenon, however, are considered as exceptional cases and are not directly discussed.

A different account was proposed by Doron & Rappaport-Hovav (2009). The authors, who also focus on reflexivization, propose that in Romance languages the clitic *si/se* is ambiguous between reflexive morphology on the verb and reflexive anaphor in an argument position. Providing examples from French, they argue that *se* is an anaphor responsible for the reflexive reading when associated with transitive verbs (31a), while it can be interpreted as either an

⁷ Although the paper focuses on reflexivity, the main generalizations also apply to reciprocity.

anaphor or simply an instance of reflexive morphology when combined with verbs that are lexical reflexives, like *se raser* ‘to shave’ (31b).⁸

- (31) a. Jean se regarde
 Jean SE look
 ‘Jean looks at himself’
 b. Jean se rase
 Jean SE shave
 i. ‘Jean shaves’
 ii. ‘Jean shaves himself’

What is interesting to retain from this account, is the claim of the existence of reflexive lexical entries in a Romance language, and that *se* would be a morphological marker on the verb when associated with them. In fact, the existence of lexical intransitive entries in French suggests that the same phenomenon could take place in Italian, since reflexive and reciprocal constructions have the same realization in these two languages.⁹ At the same time, both reflexivity and reciprocity are arity-reducing operations: accordingly, in principle there would not be anything blocking a language with lexical reflexives to also allow lexical reciprocals. In line with this prediction, Siloni (2012) acknowledges that both in Italian and French there are isolated cases of verbs allowing the discontinuous reciprocal construction, that is claimed to only be possible with lexical reciprocals (cf. §2.1): lexical reciprocal verbs would be available even in ‘syntax languages’.

Hence, the literature does not exclude the possibility for the Italian lexicon to encode lexical reciprocity; this phenomenon, however, has not been investigated extensively. Given that the question is still open, the aim of the next chapter is to identify lexical reciprocity in Italian, by looking at the semantic properties of this phenomenon illustrated in the previous sections.

⁸ Doron & Rappaport-Hovav (2009, p. 96-98) support their claim that some French predicates are lexical reflexive by looking at causative constructions and nominalization.

⁹ In French (i), just like in and Italian (ii), transitive verbs require the clitic *se/si* to create reciprocal configurations. The same holds for reflexive constructions, but we are not going to address them here.

- | | |
|---|---|
| (i) A et B se sont regardés
A and B SI are _{aux} looked
‘A and B looked at each other’ | (ii) A e B si sono guardati
A and B SI are _{aux} looked
‘A and B looked at each other’ |
|---|---|

With reference to the generalizations outlined in §2.2, we expect that if in Italian there are verbs that (i) can denote a reciprocal configuration without any grammatical marking (i.e. *si*), (ii) allow a collective reading with singular group NPs and (iii) describe *irreducible* events, then they must have a lexical reciprocal entry.

In the next chapter, we will show that these criteria converge, making it possible to identify a considerable number of Italian lexical reciprocals. Although these verbs have the same realization with *si* in finite clauses as other transitive (non-reciprocal) verbs, we will show that they allow a reciprocal reading without *si* in a specific construction, trigger reciprocal reading with singular group NPs and denote irreducible events. In addition, we will also illustrate that they allow the discontinuous reciprocal construction to a greater extent than other transitive verbs.

Chapter 3

Lexical and grammatical reciprocity in Italian

In Italian, the clitic *si* is used in a variety of constructions (see Cinque 1988, Chierchia 1995, D'Alessandro 2007). In the same structure 'subject + *si* + verb', it can generate an anticausative¹⁰, reflexive or reciprocal interpretation, among others. Before looking at reciprocity more closely, let us briefly introduce how these different interpretations interact and how it is possible to set them apart.

When the verb is transitive, constructions with a singular subject + *si* + verb always allow a reflexive interpretation, while they are ambiguous between a reflexive and a reciprocal reading when the subject is plural. As the examples in (32) show, the verb *ammirare* 'to admire', that has a transitive binary entry (32a), is unambiguously interpreted with Mary admiring herself in (32b), while it can either be interpreted with Mary and Lisa admiring each other or themselves in (32c). Here, there is no preferred reading, and the interpretation is determined by the context.¹¹

- (32) a. Mary ammira Lisa
 Mary admires Lisa
 'Mary admires Lisa'

¹⁰ We use the term *anticausative* in the sense of Alexiadou et al. (2005), to refer to verbs denoting a change of state without an external argument.

¹¹ Although we will be focusing on transitive verbs, note that also verbs with a dative object behave similarly. As the examples below show, they have a binary entry where the object is introduced by the preposition *a* 'to' (i), and they can have intransitive entries with *si*. In the latter case, they can have either a reflexive interpretation (ii) or be ambiguous between reflexive and reciprocal (iii).

- | | | |
|---|---|---|
| (i) Mary spara a Lisa
Mary shoots to Lisa
'Mary shoots at Lisa' | (ii) Mary si spara
Mary SI shoot
'Mary shoots at herself' | (iii) Mary e Lisa si sparano
Mary and Lisa SI shoot
i. 'Mary and Lisa shoot at themselves'
ii. 'Mary and Lisa shoot at each other' |
|---|---|---|

- b. Mary *si* ammira
Mary *SI* admire
'Mary admires herself'
- c. Mary *e* Lisa *si* ammirano
Mary and Lisa *SI* admire
 - i. 'Mary and Lisa admire themselves'
 - ii. 'Mary and Lisa admire each other'

Note, however, that unlike *ammirare* 'to admire', most transitive verbs do have a preferred interpretation in constructions with a plural subject and the clitic *si*, although structurally both reflexivity and reciprocity are possible. Our world knowledge can influence the interpretation of such constructions, often favoring one of the readings. Consider the examples in (33): here, just like in (32), both readings are in principle available. However, in the case of (33a) the reciprocal reading is more prominent, as we can easily think of Mary and Lisa thanking each other, while situations where individuals thank themselves are way more exceptional. The opposite situation holds for (33b): this ambiguous sentence is more easily interpreted with Mary and Lisa combing themselves. Yet, less immediate but nonetheless available is the reading where the two women comb each other.

- (33) a. Mary *e* Lisa *si* ringraziano
Mary and Lisa *SI* thank
i. 'Mary and Lisa thank each other'
ii. 'Mary and Lisa thank themselves'
- b. Mary *e* Lisa *si* pettinano
Mary and Lisa *SI* comb
i. 'Mary and Lisa comb themselves'
ii. 'Mary and Lisa comb each other'

Setting apart the reciprocal and reflexive readings becomes increasingly more difficult with some verbs. For instance, in the case of the verb *radere* 'to shave', the reflexive interpretation for the construction with plural subject + *si* + verb is significantly more prominent than the reciprocal one. Still, the latter is not ruled out: with a suitable context, it is still available. For example, we can think of a situation where Marco and Simone live in a house without mirrors

and in order not to get wounded they decide to help each other by shaving one another. In this scenario, (34) would still be acceptable.

(34) Marco e Simone si radono

Marco and Simone SI shave

i. 'Marco and Simone shave'

ii. 'Marco and Simone shave each other'

Verbs allowing an anticausative reading, like *bruciarsi* 'to get burnt', significantly favor this interpretation over a reciprocal or reflexive one. For instance, the sentence in (35) seems necessarily interpretable with Mary and Lisa getting burnt by a non-specified cause. However, with a specific context, like Mary and Lisa doing a performance juggling with fire torches and accidentally burning each other or themselves, (35) would be acceptable, but it is nonetheless challenging to set apart the anticausative reading from the reciprocal/reflexive. This difficulty is probably due to an entailment relation between these interpretations. The reciprocal/reflexive reading, in fact, entails the anticausative reading: if Mary and Lisa burnt each other/themselves, then it follows that they got burnt.

(35) Mary e Lisa si sono bruciate

Mary and Lisa SI are_{aux} burnt

ii. 'Mary and Lisa got burnt'

ii. 'Mary and Lisa burnt each other'

iii. 'Mary and Lisa burnt themselves'

It is plausible to assume that there might be a connection between the strong preference for a specific interpretation in (34) and (35) and the existence of a lexical entry. It is possible that *radere* 'to shave' and *bruciarsi* 'to get burnt' have a lexical reflexive and anticausative entry respectively in Italian, similarly to their English counterparts.¹² We will briefly address this point in the next section, since one of the constructions that we will use to uncover lexical reciprocity (i.e. the causative and the possibility to allow a reciprocal reading without *si* in it)

¹² In English, the intransitive forms of these verbs generate a reflexive (i) or anticausative (ii) interpretation, without any grammatical marking

(i) John shaved

(ii) The cake burnt.

can also be used to identify verbs with other lexical entries. For now, however, let us leave this point aside and focus on the possible interpretations of the sentences illustrated so far.

The data we presented is consistent with the idea that constructions of the type ‘plural subject + *si* + verb’ are always ambiguous between reflexivity and reciprocity, although one interpretation might be preferred.

Nonetheless, context is not the only way to disambiguate the interpretation towards reflexivity or reciprocity. In fact, it is possible to use the adverbial *a vicenda* ‘mutually, in turns’ in order to unambiguously select a reciprocal reading.¹³ Accordingly, the sentences in (36) necessarily get a reciprocal interpretation: both for verbs that are generally ambiguous between reflexive and reciprocal (36a), and for verbs that favor non-reciprocal readings (36b-c).

- (36) a. Mary e Lisa si ammirano a vicenda
Mary and Lisa SI admire mutually
‘Mary and Lisa admire each other’
- b. Marco e Simone si radono a vicenda
Marco and Simone SI shave mutually
‘Marco and Simone shave each other’
- c. Mary e Lisa si sono bruciate a vicenda
Mary and Lisa SI are_{aux} burnt mutually
‘Mary and Lisa burnt each other’

The examples in (36) show that *a vicenda* disambiguates the interpretation of the sentences, always generating a reciprocal reading in constructions of the type ‘plural subject + *si* + verb’. In fact, we will suggest that *a vicenda* is a grammatical reciprocal operator responsible for the grammatical reciprocal interpretation, similarly to *each other* in English. In contrast, we will propose that *si* is a marker of intransitivity, and it does not carry semantic information about reciprocity. In addition, we will propose that grammatical reciprocity is a covert process.

¹³ The use of *a vicenda* is not general, but restricted to verbs with a direct or dative object. On the other hand, verbs with an indirect object generally express reciprocity using *l’un l’altro* ‘each other/one another’ (see Belletti, 1982). *L’un l’altro* is also available with most transitive verbs, with some restrictions ascribed to the lexical meaning of verbs (Mocciaro, 2011). However, the use of *l’un l’altro* with transitive verbs is not widespread in spoken Italian, making it hard for native speakers to provide judgements on its grammaticality in different contexts. Therefore, given our focus on transitive verbs, we will solely discuss the adverbial *a vicenda*.

These proposals will be further elaborated in the next chapter, where we will also extend the discussion to the role of *si*.

In this chapter, on the other hand, we will focus on lexical reciprocity in Italian. Although all reciprocal interpretations of transitive verbs require the same realization in finite clauses in order to generate a reciprocal interpretation (i.e. subject + *si* + verb), we will show that lexical reciprocity is actually encoded in the Italian lexicon.

In the coming sections, we will demonstrate that there are some Italian transitive verbs which, due to their lexical reciprocal entry, can generate a reciprocal interpretation without *si* (§3.1), allow reciprocal reading with morpho-syntactically singular group NPs (§3.2) and can appear in the discontinuous reciprocal construction (§3.3). We will also show that while in these constructions lexical reciprocal verbs unambiguously have an irreducible interpretation, in finite clauses they can also have an interpretation associated to grammatical reciprocity (§3.4). Also, note that since from now on we will exclusively look at reciprocity (reflexivity and anticausativity will not play a role in the discussion), for practical reasons we will systematically leave out all the non-reciprocal readings from the translations of Italian examples. Thus, recall that the ambiguity with reflexivity is often present, but we will ignore it because it is irrelevant for our discussion.

3.1 Reciprocal reading without *si*

Although this work is primarily focused on transitive verbs, let us briefly introduce a class of Italian verbs that do not have a transitive entry, but give a reciprocal interpretation in their collective intransitive form without any grammatical marking. As (37) shows, the verb *collaborare* ‘to collaborate’, takes an indirect object in its binary entry (37a) and has a unary entry that denotes a reciprocal configuration without *si* (37b).

- (37) a. Mary (**si*) collabora con Lisa
 Mary SI collaborates with Lisa
 ‘Mary collaborates with Lisa’
- b. Mary e Lisa (**si*) collaborano
 Mary and Lisa SI collaborate
 ‘Mary and Lisa collaborate’

The behavior of *collaborare* ‘to collaborate’, is shared by a number of verbs that we summarized in Table 2 below: all of them have a reciprocal unary entry without any grammatical marking and a binary entry where the object is introduced by the preposition *con* ‘with’.¹⁴

Table 2

Verbs that allow a reciprocal interpretation without si.

Italian verbs that allow a collective intransitive entry without *si*

collaborare ‘to collaborate’, *discutere* ‘to debate’, *chiacchierare* ‘to chat’, *litigare* ‘to argue’, *condividere (qualcosa)* ‘to share (something)’, *cooperare* ‘to cooperate’, *negoziare* ‘negotiate’, *fare l'amore* ‘to make love’, *confinare* ‘to share borders’, *rimare* ‘to rhyme’, *conversare* ‘to converse’, *essere d'accordo* ‘to agree’, *competere* ‘to compete’, *divorziare* ‘to divorce’, *andare d'accordo* ‘to get along’, *parlare* ‘to talk’, *lottare* ‘to wrestle’, *combattere* ‘to fight’.

This class of verbs seems to fit the description of lexical reciprocals we provided in the previous chapter: not only do they denote a reciprocal configuration without any grammatical marking, but they also allow reciprocal reading with morpho-syntactically singular group NPs (38).

(38) Il comitato collabora

The committee collaborates

‘The committee collaborates’

Therefore, the verbs in Table 2 seem to constitute a class of lexical reciprocals and show that reciprocity without the presence of *si* is possible in Italian. Nonetheless, we cannot find any instance of transitive verbs denoting reciprocal events without *si* in finite clauses.

¹⁴ The only exception is represented by *divorziare* ‘to divorce’, where the preposition *da* ‘from’ is preferred to introduce the object:

(i) Mary divorzia da / [?]con Lisa

Mary divorces from / [?]with Lisa

However, let us look at the possibility transitive verbs might have to give a reciprocal interpretation without *si* across other constructions. This is possible in a specific construction, the so called ‘causative construction’, used by Doron & Rappaport Hovav (2009) to uncover ‘lexical reflexives’ in French. This construction consists of a sentence embedded under the causative verb ‘to make’, and it is attested in different Romance languages (Guasti, 2006). When a transitive verb is embedded under the causative, the sentence always has a passive interpretation (Maiden & Robustelli 2000, p. 276). An example is provided in (39). Here, there is only one possible interpretation: that Mary and Lisa were admired/punished/thanked by someone, due to Sara. In other words, Sara had Mary and Lisa being admired/punished/thanked.

- (39) Sara ha fatto ammirare/ punire/ ringraziare Mary e Lisa
 Sara has made admire punish thank Mary and Lisa
 ‘Sara caused Mary and Lisa to be admired/punished/thanked’

Most transitive verbs behave like *ammirare* ‘to admire’, *punire* ‘to punish’ and *ringraziare* ‘to thank’ in this respect, generating a passive interpretation. Interestingly, however, some verbs, if embedded under the causative, also allow a reciprocal interpretation (on top of the passive one), although *si* is disallowed (40).

- (40) Sara ha fatto (*si) abbracciare/lasciare/consultare (*si) Mary e Lisa
 Sara has made SI hug leave consult SI Mary and Lisa
 i. ‘Sara caused Mary and Lisa to be hugged/left/consulted’
 ii. ‘Sara caused Mary and Lisa to hug/break up/confer’

The sentences in (40) do not only have the passive interpretation of Mary and Lisa being hugged/left/consulted by someone else, but also a reciprocal one where, due to Sara, Mary and Lisa hugged/broke up/conferred. Although these verbs need *si* in finite clauses to generate a reciprocal meaning, it is clear that the reciprocal interpretation in (40) is due to the verb’s lexical meaning, which denotes a mutual configuration without the addition of any grammatical marking.¹⁵

¹⁵ This test could also be used to test Italian reflexives (as Doron & Rappaport Hovav 2009 did for French) or anticausatives. The verbs *radere* ‘to shave’ and *bruciarsi* ‘to get burnt’ keep the reflexive (i) and anticausative

Also, the type of reciprocal event described by (40) is necessarily irreducible, i.e. it cannot be reduced to two unidirectional events. Let us take *abbracciare* ‘to hug’ as an example: a reading where, under order of Sara, Mary hugged Lisa while she was sleeping and then (at a later moment) Lisa hugged Mary while Mary was asleep is ruled out. The sentence is only felicitous in a context where Mary and Lisa have been involved in a mutual hug.

The behaviour of *abbracciare* ‘to hug’, *lasciare* ‘to leave/break up’ and *consultare* ‘to consult’ is not exceptional, but shared by a number of verbs, summarized in Table 3.

Note that although the irreducibility of the event is easily illustrated by *abbracciare* ‘to hug’, because with this verb two unidirectional events do not entail a collective one (A hugged B and B hugged A $\not\Rightarrow$ A and B hugged), it may be harder to establish irreducibility with all verbs, due to different entailment relations.¹⁶

Table 3

Verbs that allow a reciprocal interpretation without si in the causative construction.

Transitive Italian that have a reciprocal interpretation in causatives without *si*

Abbracciare ‘to hug’, *lasciare* ‘to leave/break up’, *consultare* ‘to consult’, *incontrare* ‘to meet’, *baciare* ‘to kiss’, *scontrare* ‘to collide’, *coccolare* ‘to cuddle’, *salutare* ‘to greet’¹⁷, *incrociare* ‘to bump into’, *battersi* ‘to fight’, *frequentare* ‘to date’, *sposare* ‘to marry’, *guardare negli occhi* ‘to look in the eyes’, *intrecciarsi* ‘to intertwine’, *sovrapporsi* ‘to

(ii) interpretation without *si*, in the causative construction (on top of the passive one). This seems an indication that, as previously mentioned, that these verbs might have a lexical entry. A systematic investigation on this respect is left out for further research.

- | | |
|---|--|
| <p>(i) Ho fatto radere Luigi
Have_{aux.1sg} made shave Luigi
i. ‘I caused Luigi to shave’
ii. ‘I caused Luigi to be shaved’</p> | <p>(ii) Ho fatto bruciare Luigi
Have_{aux.1sg} made burn Luigi
i. ‘I caused Luigi to get burnt’
ii. ‘I caused Luigi to be burnt’</p> |
|---|--|

¹⁶ It is, for instance the case of *lasciare* (literally: ‘to leave’, but which denotes a ‘breaking up’ event in the collective entry): A left B and B left \Rightarrow A and B broke up. For this reason, while *abbracciare* ‘to hug’ in the causative construction unambiguously leads to a mutual collective hug, the irreducibility of the event cannot be demonstrated with verbs like *lasciare* ‘to leave/break up’.

¹⁷ *Salutare* ‘to greet/say hi’ in Italian does not only refer to the action of two people saying hi to each other, but it can also refer to any non-verbal form of greeting, e.g waving at each other, fist-bumping, shaking hands or giving a pat on each other’s shoulder.

overlap’, *mescolarsi* ‘to mix’, *confondersi* ‘to confuse’, *alternarsi* ‘to alternate’, *unirsi* ‘to merge’.¹⁸

Therefore, we propose that the Italian verbs in Table 3 must have a lexical reciprocal entry. In order to provide evidence in favour of this proposal, let us illustrate, in the next sections, that these verbs also share features with lexical reciprocal verbs in other languages. We will focus on the possibility to give a reciprocal interpretation with singular group NPs, and to appear in the discontinuous reciprocal construction.

3.2 Reciprocal interpretation with singular group NPs

In the previous chapter, we used English as an example to show that only verbs with a lexical reciprocal entry allow collective interpretations with morpho-syntactically singular group NPs (like *the committee* or *the couple*), while grammatical reciprocity necessarily needs a plural predication. Let us now look at Italian, to show that the verbs that we claim to have a lexical reciprocal entry also allow reciprocity with singular number.

We adopted Barker’s notion that group NPs are nouns taking a plural *of*-complement (*di* in Italian). Accordingly, *comitato* ‘committee’, *coppia* ‘couple’ and *squadra* ‘team’ are group NPs, as shown in (41):

- (41) a. Un comitato di donne
 ‘A committee of women’
 b. Una coppia di donne
 ‘A couple of women’

¹⁸ We will keep *si* in the citation form of verbs that do not have a binary entry, but undergo the causative/inchoative alternation (Levin, 1993) and express a reciprocal configuration among the objects of the binary entry (i) and the subjects of the unary entry (ii).

- (i) Mary ha intrecciato il filo blu e il filo verde
 Mary has_{aux} intertwined the string blue and the string green
 ‘Mary intertwined the blue string and the green string’
(ii) Il filo blu e il filo verde si sono intrecciati
 the string blue and the string green SI are_{aux} intertwined
 ‘The blue string and the green string intertwined’

c. Una squadra di donne

‘A team of women’

As expected, verbs that we identified as lexical reciprocals using the causative test allow reciprocal interpretation with singular group NPs, as in (42).

(42) Il comitato si abbraccia/ consulta/ incontra

The committee SI hug consult meet

‘The committee hugs/ confers/ meets’

‘#The committee hugs/ consults/ meets itself’.¹⁹

The sentences in (42) are interpreted with the members of the committee hugging/conferring/meeting. The same interpretation is available for all the other lexical reciprocals in Table 3.²⁰

Note that the sentences in (42) get an irreducible interpretation. In the case of *abbracciare* ‘to hug’, (42) is true if the members of the committee get involved in mutual hugs (also in turns, if there are more than two members), but a situation where one (or more) member(s) hugged one (or more) passive member(s), who reciprocated in a later moment, would be ruled out.

These data provide evidence for our proposal: the fact that the outcomes of the causative construction and the singular group NPs converge, support our prediction that the verbs in Table 3 have a lexical reciprocal entry.

¹⁹ Given that *si* generally triggers a reflexive interpretation with singular predications, a reflexive interpretation of the sentences in (17) is structurally available, but infelicitous.

²⁰ *Lasciare* ‘to leave’, *sposare*, ‘to marry’ and *frequentare* ‘to date’ constitute more complex examples due to pragmatic reasons. Given our world knowledge, we do not expect the committee as a whole to date, marry or break up. Accordingly, with the group NP *il comitato*, these verbs generate a reciprocal interpretation according to which each member of the committee broke up/married/dated with someone else. Nonetheless, these verbs indeed allow a collective reading with the group NP *la coppia* ‘the couple’ (i).

(i) La coppia si è lasciata/sposata/frequentata

The couple SI is_{aux} left married dated

‘The couple broke up/married/dated’

We also expect all other transitive verbs (which do not give a reciprocal interpretation without *si*) to disallow the possibility to appear with morpho-syntactically singular group nouns. This expectation is also borne out (43).

- (43) #Il comitato si ammira /punisce/ ringrazia
 The committee SI admire /punish/ thank
 #The committee admires/punishes/thanks itself

The example above shows that the use of singular predication with transitive verbs does not allow a reciprocal interpretation, but only an infelicitous reflexive reading, roughly translatable with the committee as a whole punishing/admiring/thanking itself. Hence, the data in (42) and (43) support our analysis so far.

Nonetheless, it is important to mention a complication that requires further research. When testing the possibility to give reciprocal interpretation with *il comitato*, the identification of verbs with a lexical reciprocal entry is rather straightforward, as they precisely correspond to verbs that give a reciprocal interpretation in causatives. However, we do not have the same outcomes with the group NP *la coppia* ‘the couple’, as shown in (44).

- (44) a. La coppia si consulta/incontra/abbraccia
 The couple SI consult meet hug
 ‘The couple confers/ meets/ hugs’
 b. *La coppia si ammira/ punisce / ringrazia
 The couple SI admire punish thank
 c. La coppia si insulta/ sopporta/ evita
 The couple SI insults put up with avoid
 ‘The members of the couple insults /put up with/avoid each other’

La coppia behaves like *il comitato* in allowing reciprocal reading with all verbs with a lexical reciprocal entry (44a) and disallowing reciprocity with other transitive verbs (44b). However, (44c) shows that some verbs that we did not identify as lexical reciprocals surprisingly allow reciprocal interpretation with the singular NP *la coppia*. This mismatch goes against our generalization, since the verbs in (44c) only allow a passive interpretation in the causative construction. This leads us to wonder whether *la coppia* somehow behaves differently than *il comitato*, or whether there is something peculiar with the behaviour of the verbs in (44c).

Regarding the former option, it seems indeed that *la coppia* allows easier access to group members than other group nouns, e.g. *il comitato*. We might speculate that there must be some factors determining the ease of access to members of the group. De Vries (2015, p. 126), following Corbett (2000), proposes that animacy and cardinality play a role: we are more likely to individuate human individuals and we care more about them when they are in small groups. However, this explanation does not provide independent evidence for verbs that presumably do not have a lexical reciprocal entry to allow a collective reading with a singular predication. Although we can speculate on their interpretation, both *la coppia* and *il comitato* are morpho-syntactically singular.

A more plausible explanation for the behavior of the verbs in (44c) is that they do not have a lexical reciprocal entry, but their possibility to appear with *la coppia* and give a reciprocal interpretation might simply be due to typicality effects, i.e. how often people encounter situations where these verbs denote (grammatical) reciprocal configurations. Clearly, this explanation is also incomplete and it would require further research. Therefore, we will leave this problem aside, taking it as an indication that using indirect tests to identify lexical reciprocity might generate divisions that are not precisely clear-cut. We will then focus our attention on *il comitato*, proposing that verbs allowing a reciprocal interpretation with it do so because of their lexical reciprocal entry. They are the same verbs we previously summarized in Table 3.

In the next section, we will provide further support for the claim that these verbs are lexical reciprocals, showing that they have a higher acceptability in the discontinuous reciprocal construction, compared to other transitive verbs.

3.3 Discontinuous reciprocal construction

In the previous chapter, we have seen that cross-linguistically, the possibility to appear in the discontinuous reciprocal construction (henceforth DRC) is a feature associated with lexical reciprocals.

In the literature, it has been suggested that discontinuous reciprocity is unavailable in Italian (Dimitriadis 2004, a.o.), while Sioni (2012, p. 300) claimed that in French and Italian there are “isolated cases” of verbs allowing the DRC.

The first empirical study on the restrictions that govern the appearance of different Italian verbs in this construction was provided by Mocciaro (2011). The author generalized that verbs

denoting “situations that are necessarily semantically reciprocals (e.g. ‘to meet’)” are fully acceptable in the DRC, while verbs denoting “frequent but not necessary reciprocal events (e.g. ‘to kiss’)” are claimed to be acceptable in the DRC, but only in colloquial speech (p. 333-344), as exemplified in (45) and (46) respectively. Other verbs cannot appear in the DRC (if we exclude some cases at very informal or sub-standard level, where they necessarily describe nuances of meaning), as in (47).

(45) Anna si incontra con Pietro
Anna SI meet with Pietro
‘Anna meets with Pietro’
(from Mocciaro 2010, p. 343)

(46) Anna si bacia con Pietro
Anna SI kiss with Pietro
‘Anna kisses with Pietro’
(from Mocciaro 2010, p. 344)

(47) a. Anna si guarda con Pietro
Anna SI look with Pietro
‘Anna and Pietro look at each other’ (context: courting act)
(from Mocciaro 2010, p. 344)

b. *Anna si ringrazia con Pietro
Anna SI thank with Pietro

The classification provided by Mocciaro (2011) is valuable in first recognizing the possibility of some Italian verbs to appear in the DRC based on their status with respect to reciprocity. On the other hand, however, it does not lend support to our analysis of lexical reciprocity in Italian. In fact, the division proposed by Mocciaro does not follow from the presence of a lexical reciprocal entry, but it is rather based on *necessarily* or *frequently* reciprocal verbs, terminology adopted by the author to define verbs requiring symmetric participation or not. In our theory, however, this is not expected to play a role, as long as verbs have a lexical reciprocal entry. For this reason, we expect verbs like *baciare* ‘to kiss’ and *incontrare* ‘to meet’ to behave similarly in the DRC, given that (if we leave aside some subtle pragmatic distinctions) they do so across other constructions.

Thus, we expect that verbs that we identified as having a lexical reciprocal entry would allow the DRC, unlike other transitive verbs. A potential complication to keep in mind is the huge variation existing in Italian, due to dialectal influence. For this reason, we suspect that if there are geographical areas where the acceptability of the DRC is lower than in others, within speakers of these areas verbs with a lexical reciprocal entry would still have higher acceptability than other transitive verbs. In order to test this expectation, we conducted a questionnaire to find out to what extent Italian native speakers accept the DRC depending on the verbs involved.

3.3.1 The questionnaire

The questionnaire was run online with *LimeSurvey*, all participants were volunteers and did not receive any monetary compensation.

Participants - 133 native speakers of Italian (age $M = 30$) completed the questionnaire. They came from 36 different Italian provinces.

Procedure – The first pages of the questionnaire contained a text on informed consent, and instructions. Participants were asked to carefully read the sentences that they would have been presented, and to rate their acceptability on a Likert scale from 1 to 5, following their intuition. The text also contained an explanation for the term *acceptability*, with an example.

The survey was divided into two tasks. First, participants performed the main task: they judged the acceptability of different sentences containing the DRC, which were presented on a grid, five or six at the time, for five rounds: there were 29 sentences in total.

Secondly, to make sure that participants who accepted the sentences with the DRC did not do so by having a non-reciprocal interpretation in mind, we added a minor task on the interpretation of the sentences judged in the previous task. The items that were ranked 3 or higher on the Likert scale were shown again, once at the time. This time, participants were asked what they could conclude from the sentences that were presented and answered in a multiple-choice question. To avoid biasing participants' judgements by presenting choices containing the clitic *si*, we provided the following four options: (i) binary, (ii) reciprocal, (iii) reflexive, (iv) other. An example is provided below, all the items presented to participants can be found in Appendix A.

Sentence: *Marco si incontra con Sara* ‘Marco meets with Sara’,

(i) *Marco incontra Sara* ‘Marco meets Sara’

(ii) *Marco incontra Sara e Sara incontra Marco* ‘Marco meets Sara and Sara meets Marco’

(iii) *Marco incontra se stesso (in presenza di Sara)* ‘Marco meets himself (in presence of Sara)’

(iv) *other*: specify

The verbs - We presented 14 experimental verbs in total, including both verbs with and without a lexical reciprocal entry. We only tested a small sample of verbs, to avoid the risk of losing participants’ focus due to too many items.²¹ We focused on verbs whose grammaticality in the DRC is generally not unanimously accepted, or for which it is harder to find attested examples.²²

All the sentences presented had the same surface structure of the DRC (with the clitic *si* and the preposition *con*), but only the experimental items and some control items were actual instances of discontinuous reciprocity.²³

The questionnaire also contained control and filler items. Control items were used to measure the reliability of participants’ judgements: all control items were attested examples, for which we expected very high acceptability (16 participants were excluded based on their behaviour

²¹ Therefore, the outcomes of the questionnaire will not provide an exhaustive list of which Italian verbs allow the DRC, which is beyond the scope of this work. The questionnaire has the aim of testing whether, as we hypothesize, the acceptability of the DRC can be explained in terms of a lexical reciprocal entry.

²² For instance, verbs like *consultare* ‘to consult’, *lasciare* ‘to leave/break up’, *scontrare* ‘to collide’, *frequentare* ‘to date’, a.o., are commonly used in the DRC, and a number of examples can be easily found with a Google search. For this reason, we did not include them in the questionnaire, giving priority to lexical reciprocals whose acceptability in the DRC is uncertain.

²³ Some of the sentences that did not contain a DRC, were instances of *ethical dative*, i.e. constructions where a clitic is unnecessary for the grammaticality of the sentence but it expresses the emotional involvement of a participant in the action (Salvi 1988, p. 65), as in (i). Other sentences contained *intransitive pronominal* (Jezek 2003, p. 79): intransitive verbs necessarily requiring the pronominal marker *si*, as exemplified in (ii).

(i) Francesco si è letto un libro
Francesco SI is_{aux} read a book
‘Francesco read a book’

(ii) Matteo si esibisce
Matteo SI performs
‘Matteo performs’

on control items, because they rated at least one of the control items 1 on the scale).²⁴ Filler items were used in order not to prime a reciprocal interpretation: most of them were not instances of the DRC. Also, some of them were acceptable attested examples, giving participants a mean of comparison. The complete list with all items is in Appendix B, while Table 4 below includes the experimental and control verbs.

Table 4

Control and experimental items used in the questionnaire.

Type	Verb	Expected acceptability
control	<i>sposare</i> ‘to marry’, <i>incontrare</i> ‘to meet’	✓
	<i>fare la doccia</i> ‘to shower’, <i>arrabbiarsi</i> ‘to get angry’, <i>esibirsi</i> ‘to perform’	✗
experimental	<i>guardare negli occhi</i> ‘to look in the eyes’, <i>abbracciare</i> ‘to hug’, <i>baciare</i> ‘to kiss’, <i>coccolare</i> ‘to cuddle’, <i>salutare</i> ‘to greet’	✓
	<i>inseguire</i> ‘to chase’, <i>guardare</i> ‘to look’, <i>evitare</i> ‘to avoid’, <i>insultare</i> ‘to insult’, <i>ringraziare</i> ‘to thank’, <i>implorare</i> ‘to implore’, <i>notare</i> ‘to notice’, <i>seguire</i> ‘to follow’, <i>sopportare</i> ‘to put up with’	✗

Verbs that we claim to be lexical reciprocals, given the possibility to give a reciprocal interpretation without *si* in causatives and to allow collective reading with the singular NP *il comitato* ‘the committee’, are those for which we expect the DRC to be accepted by native speakers, as indicated in the third column of Table 4. However, given that in the questionnaire we asked participants to rate their acceptability on a Likert scale, we expect that these verbs will have higher acceptability than the other transitive verbs.

²⁴ *Sposare* ‘to marry’ and *incontrare* ‘to meet’ were used as discontinuous reciprocal controls: their perfect acceptability in this construction was suggested by the work of Mocciaro (2011) and by the consultation of different native speakers, and it was further confirmed by a Google search.

Results - An overview of the results is presented in Figure 1, where we also included the control items with a lexical reciprocal entry (i.e. *sposare* ‘to marry’ and *incontrare* ‘to meet’).

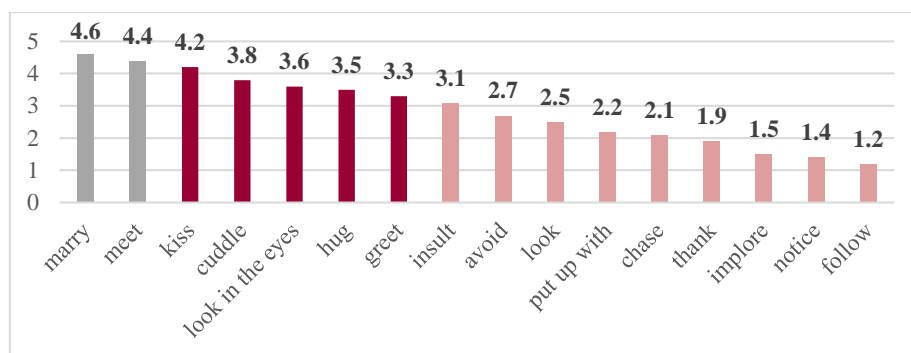


Figure 1. Average acceptability of experimental items for all participants.

The two control items ‘to marry’ and ‘to meet’ have the highest acceptability rate, with an average of 4.6 and 4.4 respectively. Verbs that we claim to have a lexical reciprocal entry (represented with a darker red in Figure 1) have an average acceptability rate that ranges from 4.2 to 3.3. This shows that there is some variation among lexical reciprocals, but they all have higher acceptability than other transitive verbs.

We can see from Figure 1 that 3.3 constitutes a sort of threshold: verbs that have an average acceptability lower than that, are transitive verbs that we do not expect to have a lexical reciprocal entry (represented with a lighter red in Figure 1). The average acceptability of these verbs ranges from 3.1 to 1.2.

Additionally, as expected, most participants who accepted the DRC for verbs with a lexical reciprocal entry, opted for a reciprocal interpretation (i.e. *A verb B and B verb A*, where A and B are the two individuals in the sentence), as shown in Table 5.

Table 5

Interpretation of lexical reciprocal verbs in the DRC.

Verb	Answers to the interpretation question	Reciprocal answers to the interpretation question
<i>Baciare</i> ‘to kiss’	92%	87%
<i>Coccolare</i> ‘to cuddle’	79%	87%
<i>Guardare negli occhi</i> ‘look in the eyes’	73%	92%
<i>Abbracciare</i> ‘to hug’	71 %	90%
<i>Salutare</i> ‘to greet’	72%	88%

The second column of the table shows the percentage of participants who answered the question about interpretation (the rest of participants rated the corresponding sentence lower than 3). In the third column, on the other hand, we can see which percentage of the participants who did answer the question about interpretation, chose the reciprocal option. The remaining part opted for the transitive option: *A verb B*.²⁵ Although the results of this task do not provide an elaborated description of the interpretation of the experimental items, it is helpful to exclude the possibility that participants might have accepted the DRC with a different (non-reciprocal) interpretation in mind.

Discussion - The acceptability pattern emerged by the questionnaire provides support for our hypothesis. Verbs that we claim to have a lexical reciprocal entry have higher acceptability in the DRC than other transitive verbs. We also excluded the possibility that participants accepted the DRC with a different interpretation in mind (e.g. reflexive), thanks to the results of the second task.

The general pattern follows our expectation, although the average acceptability for lexical reciprocals ranges from 4.2 to 3.3. Interestingly, also the average acceptability of the (non-reciprocal) transitive verbs changes consistently: from 3.1 to 1.2. Given the divergence already emerged in the previous section between different (non-lexical reciprocal) transitive verbs when combined with the singular group NP *la coppia* ‘the couple’, we could expect also this construction not to generate a clear-cut division, but rather to give different acceptability rates for different transitive verbs.

To summarize, the outcomes of the questionnaire provide additional support for our claim: a sample of verbs that we identified as having a lexical reciprocal entry, given the possibility to generate reciprocal reading without *si* and to allow collective reading with a singular predication, also have high acceptability in the DRC.

²⁵ The transitive and the reciprocal interpretation are challenging to set apart, given that the latter often entails the former. To exclude (at least some of) the participants who might potentially chose the transitive option with a reciprocal interpretation in mind, we used the verbs *sposare* ‘to marry’ as a control. Given that this verb requires symmetric participation, we excluded (only for this task) results of participants who selected the binary interpretation for this verb.

Although the results are in line with our theory, at the beginning of the section we mentioned that according to the existing literature, the DRC was predicted to be disallowed in Italian, or only available with a sub-group of lexical reciprocals. This discrepancy could be due to the huge variation that exists among Italian speakers, where the area of origin might highly influence people’s judgements. Hence, let us briefly check whether our results would be consistent across different varieties of Italian.

Geographical differences: results and discussion: - The results we summarized in Figure 1 were collected from participants from over 30 Italian provinces. In order to eliminate the geographical area as a potential cause for the difference in acceptability, we isolated data from three small groups of participants according to the variety of Italian spoken.²⁶ One group, from the North, is composed of 18 participants (age M = 26) from the region of Veneto, specifically from the close provinces of Verona, Padova, Vicenza, Treviso, Venezia. Another group, composed of 41 participants (age M = 29) from Central Italy, includes speakers from the provinces of Macerata and Fermo. Finally, a group from Southern Italy was formed of 17 participants (age M = 38) from the Southern part of region Puglia, from the provinces of Lecce, Brindisi and Taranto.²⁷ An overview of the results of these three different groups is provided in Figures 2, 3, and 4 below.

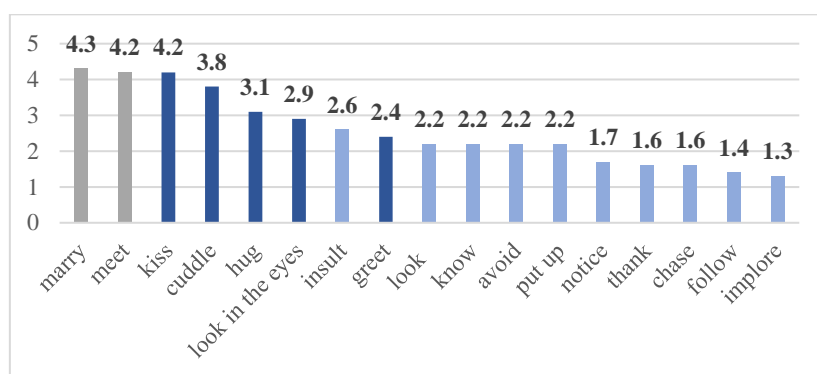


Figure 2. Average acceptability of experimental items for 18 participants from Northern Italy (provinces of Verona, Padova, Vicenza, Treviso, Venezia)

²⁶ We based the identification of varieties on the distinction made by Grassi, Sorbero & Telmon (2003), also found in De Mauro & Lodi (1979), a.o. We isolated data of speakers from *Veneto* (North), *Area Mediana* (Center) and *Salentino* (South).

²⁷ Data from the remaining 27 participants (from different provinces of Italy) are not included here.

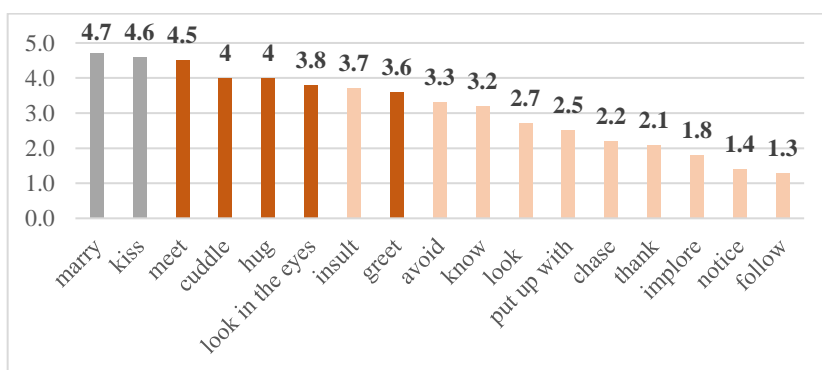


Figure 3. Average acceptability of experimental items for 41 participants from Central Italy (Provinces of Macerata and Fermo).

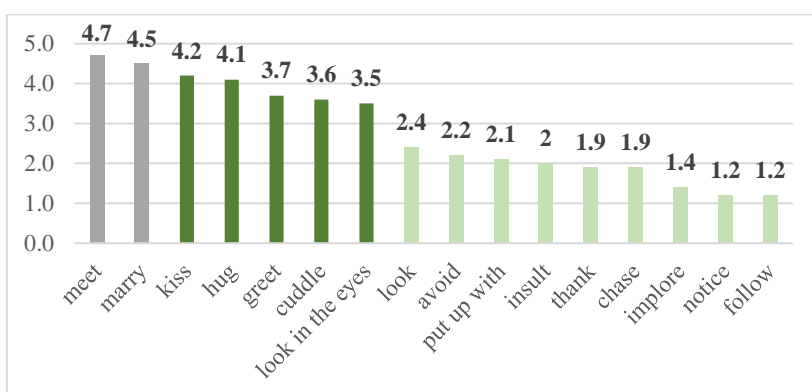


Figure 4. Average acceptability of experimental items for 17 participants from Southern Italy (Provinces of Brindisi, Lecce and Taranto).

It is clear from the three figures above that speakers from the North are substantially less generous in their acceptability judgements, compared to speakers from Central and Southern Italy. If we keep 3.3 as a threshold to distinguish lexical reciprocals from other transitive verbs, then only ‘to kiss’ and ‘to cuddle’ could be considered to have a lexical reciprocal entry in this variety of Northern Italian. Also, if we consider 3.3 as a threshold, in Central Italy the verbs *insultare* ‘to insult’ and *evitare* ‘to avoid’ seem to behave like lexical reciprocals in this construction.²⁸ Speakers from Southern Italy, on the other hand, performed precisely according to our prediction: lexical reciprocals have a considerably higher acceptability than other transitive verbs.

²⁸ As further research, it would be interesting to check whether *insultare* ‘to insult’ and *evitare* ‘to avoid’ would be accepted with singular group NPs, or if they would get a reciprocal interpretation in the causative construction among speakers of this variety.

Thus, the difference in acceptability between lexical reciprocals and other transitive verbs is more considerable in some varieties, while in the North most of the verbs we tested do not seem to behave like lexical reciprocals in the DRC. Generally, however, the acceptability pattern is overall consistent across geographic areas: verbs with a lexical reciprocal entry have higher acceptability among these three groups.

DRC: further remarks - Before concluding this section, let us remark that Italian provides support for Dimitriadis' (2004) claim that the DRC only describes irreducible events. In the case of *abbracciare* 'to hug', the sentence in (48) can only be interpreted with a mutual hug: as for the causative construction and singular group NPs, the scenario where Mary hugs a passive Lisa and, in a different moment, Lisa hugs a passive Mary is ruled out.

- (48) Mary si abbraccia con Lisa
Mary SI hug with Lisa
'Mary hugs with Lisa'

This generalization is not surprising, but it needs to be disentangled from an empirical challenge connected to the methodology of our questionnaire. When asking participants about the interpretation of the sentences with the DRC, the reciprocal option that we provided did not seem to lend support to a lexical strategy: *A verb B and B verb A*. We did so to avoid providing an option with the clitic *si* (e.g. *A and B SI hugged*), which could have biased participants' judgements. Therefore, it is important to clarify that the DRC only denotes irreducible events, and that the interpretation options chosen by participants are to be considered as mere indications of the directionality of the event.

Therefore, we claim that the DRC only supports lexical reciprocity: Italian verbs with a lexical reciprocal entry have higher acceptability rates in it than other transitive verbs, and they have an irreducible interpretation.

3.4 Finite clauses and the adverbial *a vicenda*

In the previous sections, we have proposed that lexical reciprocity exists in Italian, and it is possible to uncover it in causative constructions, morpho-syntactically singular group NPs and in the DRC. We also illustrated that in these different constructions, lexical reciprocal verbs only generate an irreducible interpretation. We systematically exemplified it using the verb

abbracciare ‘to hug’, claiming that in these constructions only an interpretation where the individuals are involved in a mutual hug is possible, while we excluded any potential interpretation with different unidirectional hugs. Let us now go back to finite clauses of the type ‘plural subject + *si* + verb’ that we introduced at the beginning of this chapter.

- (49) Mary e Lisa si sono abbracciate
Mary and Lisa SI are_{aux} hugged
‘Mary and Lisa hugged (each other)’

In (49), unlike in the constructions discussed so far, the verb *abbracciare* ‘to hug’ allows both an irreducible interpretation as well as an interpretation denoting different unidirectional events. This time, the scenario where Mary hugs a passive Lisa and Lisa (later on) hugs a passive Mary is not ruled out. Additionally, also an interpretation where Mary and Lisa are involved in a mutual hug is indeed possible. Let us further illustrate this ambiguity with another lexical reciprocal verb, *lasciare* ‘to leave/break up’ (50).

- (50) Mary e Lisa si sono lasciate
Mary and Lisa SI are_{aux} left
‘Mary and Lisa broke up/left each other’

The sentence in (50) can either be interpreted with Mary and Lisa having left each other or having broken up. In the former case, we would need Mary leaving Lisa and Lisa leaving Mary, either physically (e.g. leaving her somewhere with the car after having given a lift) or figuratively (e.g. putting an end the relationship with her). In the latter case, both Mary and Lisa would take part of a breaking up event, where they stop being a couple: this would still be true if Mary decided to break up with Lisa, who was against the decision and still in love with Mary. Hence, (49) and (50) seem to suggest that both lexical and grammatical reciprocity are available in finite clauses: both irreducible and reducible events are possible here.

There is, however, the possibility to isolate the reducible interpretation, i.e. the interpretation generally associated with grammatical reciprocity, by using the adverbial *a vicenda* ‘mutually, in turns’. Consider the examples in (51).

- (51) a. Mary e Lisa si sono abbracciate a vicenda
Mary and Lisa SI are_{aux} hugged mutually
‘Mary and Lisa hugged each other’

- b. Mary e Lisa si sono lasciate a vicenda
 Mary and Lisa SI are_{aux} left mutually
 ‘Mary and Lisa left each other’

With respect to (51a), now we need the active participation of both Mary and Lisa, not necessarily at the same time: an interpretation where Mary hugs a passive Lisa and Lisa hugs a passive Mary is not ruled out, but it is also possible that they are involved in a mutual hug, as long as both of them are active. The interpretation triggered by *a vicenda* is clearer if we look at the verb *lasciare* ‘to leave/break up’ (51b): now the reading where only Mary deserts a passive Lisa (maybe still in love with Mary) does not make the sentence true anymore: both of them must be leaving the other person.

A vicenda, therefore, must be generating grammatical reciprocity. Surprisingly, it also does so in the causative construction, not only with lexical reciprocals (52a), but with any transitive verb (52b).

- (52) a. Sara (*si) ha fatto (*si) lasciare (*si) Mary e Lisa a vicenda
 Sara SI has_{aux} made SI leave SI Mary and Lisa mutually
 ‘Sara caused Mary and Lisa to leave each other’
 b. Sara (*si) ha fatto (*si) punire (*si) Mary e Lisa a vicenda
 Sara SI has_{aux} made SI punish SI Mary and Lisa mutually
 ‘Sara caused Mary and Lisa to punish each other’

With the addition of the adverbial *a vicenda*, the sentence in (52a) gets a necessarily reducible interpretation. Now, just like in (51b), the scenario where Mary leaves a passive Lisa is not possible anymore: here Sara caused each member of the couple to actively leave the other. Furthermore, *a vicenda* not only disambiguates the reciprocal verb in (52a), but it is also responsible for a reciprocal interpretation with transitive verbs having no lexical reciprocal entry. The verb *punire* ‘to punish’, which only allows a passive interpretation in the causative construction without *a vicenda* (cf. 40), gets a reciprocal interpretation in (52b), although *si* is disallowed. Here, due to Sara’s acts, Mary and Lisa punished each other.

These data lead us to propose that *a vicenda* must be a reciprocal operator, like the English *each other*, responsible for the grammatical reciprocal interpretation. Like this pronominal element, *a vicenda* needs a plural predication and it is not allowed with singular group NPs and in the DRC, as shown in (53).

- (53) a. *Il comitato si abbraccia a vicenda
 The committee SI hug mutually
- b. Mary si abbraccia (*a vicenda) con Lisa (*a vicenda)
 Mary SI hug mutually with Lisa mutually

Therefore, we propose that there are two different reciprocal strategies in Italian. Lexical reciprocity, which appears with *si* (in finite clauses, with group NPs and in the DRC) or without any grammatical marking (in causative constructions without *a vicenda*). Recall that this strategy is also available without *si* for a restricted set of verbs with an indirect object (cf. Table 2). Grammatical reciprocity, on the other hand, appears with *si* in finite clauses and with *a vicenda* in causative constructions, while it is disallowed with singular group NPs and in the DRC. The availability of these two strategies across different constructions, summarized in Table 6, explains the ambiguity in finite clauses between lexical and grammatical reciprocity: both strategies are available in this construction, and they both appear with *si*.

Table 6

Distribution of lexical and grammatical reciprocity across different constructions.

Type of reciprocity	Finite clauses	Causative construction (-a vicenda)	Causative construction (+a vicenda)	Singular group NPs	DRC
lexical	+	+	-	+	+
grammatical	+	-	+	-	-

To conclude, in this chapter we provided evidence that some Italian verbs have a lexical reciprocal entry. These verbs can get a reciprocal interpretation without *si* in causative constructions, hence we are led to conclude that they can also do so in other constructions. This suggests that the presence of *si* does not contribute to the reciprocal interpretation of such verbs. Moreover, given the data we provided on the causative construction, we propose that *si* is also not responsible for grammatical reciprocity. In the next chapter, we will elaborate more on this observation, claiming that *si* is just a marker of intransitivity and that grammatical reciprocity in Italian can be a covert process.

Chapter 4

Discussion: different strategies and the role of *si*

In the previous chapter, we provided evidence showing that with a considerable class of Italian verbs reciprocity is encoded in the lexical meaning, and we illustrated the realization of lexical and grammatical reciprocity in Italian. In this chapter, we will elaborate on the realization of these two strategies, also providing a theoretical explanation for the distribution and the role of *si*. Although a full syntactic analysis of *si* would go beyond the scope of this work, in this chapter we will set forth our preliminary conclusions about the role of this clitic.

Given the data illustrated in the previous chapter, we propose that in Italian reciprocal meanings are not carried by *si*, but by a lexical reciprocal verbal meaning for verbs with a lexical reciprocal entry, or by a grammatical reciprocal operator for all other transitive verbs. Let us now have a closer look at the realization of these two different strategies.

4.1 Lexical reciprocity

In the previous chapter, we identified a considerable number of Italian verbs that behave like lexical reciprocals cross-linguistically: they do not need any grammatical marking to denote reciprocal configurations and they can appear with singular predication. Therefore, we claim that they have a lexical reciprocal entry.

We have shown that these verbs denote reciprocal readings without any grammatical marking in causative constructions (54), but they appear with *si* in finite clauses (55), group NPs (56) and in the DRC (57).²⁹

²⁹ However, note that it is possible for lexical reciprocals to give a collective reading with a morpho-syntactically singular group NPs without *si* if embedded under a causative (i). The same holds for the DRC (ii).

(i) Ho fatto abbracciare il comitato
Have_{1sg} made hug the committee
'I made the committee hug'

(ii) Ho fatto abbracciare Mary con Lisa
Have_{1sg} made hug Mary with Lisa
'I made Mary hug with Lisa'

- (54) Sara ha fatto abbracciare Mary e Lisa
 Sara has_{aux} made hug Mary and Lisa
 ‘Sara caused Mary and Lisa to hug’
- (55) Mary e Lisa si abbracciano
 Mary and Lisa SI hug
 Mary and Lisa hugged (each other)’
- (56) La coppia si abbraccia
 The couple SI hug
 ‘The couple hugs’
- (57) Mary si abbraccia con Lisa
 Mary SI hugs with Lisa
 ‘Mary hugs with Lisa’

Given the possibility of these lexical reciprocals to generate a reciprocal interpretation without *si* (54), it would be implausible to think that this clitic is responsible for the reciprocal interpretation in other constructions, where it necessarily appears. Hence, we claim that *si* is a syntactic marker of intransitivity. It does not carry semantic information about reciprocity, but only categorical information: it shows that the verb it combines with is a unary verb.

Following Labelle (2008), we claim that *si* is a marker of intransitivity that resides in Voice. This explains its distribution in the examples (54)-(57) above: it is disallowed in the causative construction, where the Voice position is unavailable (Guasti, 2006), but it is necessarily spelled out when the position is available (55), (56), (57). All the examples above are instances of the same reciprocal strategy, the only difference lies in the availability of the intransitivity marker.

4.2 Grammatical reciprocity: a covert process

In the previous chapter, we have also shown that in Italian grammatical reciprocity is available with any transitive verb. The examples below summarize the realization of this strategy: it appears with *a vicenda* (58), with *si* (59), or with both (60).

(58) Sara ha fatto punire Mary e Lisa a vicenda
Sara has_{aux} made punish Mary and Lisa mutually
'Sara caused Mary and Lisa to punish each other'

(59) Mary e Lisa si puniscono
Mary and Lisa SI punish
i. 'Mary and Lisa punish each other'
ii. 'Mary and Lisa punish themselves'

(60) Mary e Lisa si puniscono a vicenda
Mary and Lisa SI punish mutually
'Mary and Lisa punish each other'

Given its distribution, the claim that *si* is just an intransitivity marker also holds true for grammatical reciprocity. The possibility of *a vicenda* to generate a reciprocal interpretation without *si* (58) leads us to conclude that it must be this adverbial that carries the reciprocal information, not *si*. Thus, it must also be the case in (60): here both *si* and *a vicenda* are present, and it is implausible that both elements are responsible for the reciprocal interpretation of the sentence. If both *si* and *a vicenda* were grammatical reciprocal operators saturating an argument position, one of them must have been ruled out. Note that although both *a vicenda* and *si* can generate a reciprocal interpretation alone – (58) and (59) respectively – only in the former case the sentence is unambiguously reciprocal, while the latter can also have a reflexive interpretation. Accordingly, we conclude that *a vicenda* must be a reciprocal operator, systematically generating a (grammatical) reciprocal interpretation, similarly to *each other* in English. The function of *si*, on the other hand, is in line with what we previously proposed: a marker of intransitivity.

However, as shown in (59), grammatical reciprocity can also take place without *a vicenda*. We propose that in such cases grammatical reciprocity is a covert process, licensed by *si*. The claim that *si* resides in Voice explains the different instances of grammatical reciprocity summarized in the examples above. When the Voice position is available (finite clauses), *si* must be spelled out, and it licenses covert (59) or overt (60) reciprocity: the semantics of the

two sentences is the same.³⁰ On the other hand, when the Voice position is unavailable (causative construction), covert reciprocity is disallowed, since there is no *si* to license it. Yet, in such cases overt reciprocity is still available (58).

To summarize, our discussion leads to the following conclusions:

- (i) Two reciprocal strategies are available in Italian: grammatical and lexical reciprocity;
- (ii) Grammatical reciprocity can be a covert or an overt process;
- (iii) *A vicenda* is a grammatical reciprocal operator, which is spelled out in overt grammatical reciprocity. *Si* is a marker of intransitivity and it license covert reciprocity.

These conclusions provide a clear distinction of lexical and grammatical reciprocity as two different strategies in Italian, and they also contribute to the general discussion on the role of *si*. Although a full-scale comparison with previous proposals on the role of *si* is not possible within the scope of this work, we will briefly put our theory in the light of the existing literature, to delineate our contribution with respect to the general debate.

In chapter 2, we mentioned that Reinhart & Siloni (2005) introduced *bundling*, an operation that reduces the θ -grid of verbs. In the so-called ‘syntax languages’, including Italian, bundling takes place in the syntax, where *si* reduces the possibility of the verb to check accusative case. Also, Reinhart & Siloni argue against the treatment of reflexive verbs as transitive, providing evidence for *si* not to be an object clitic. In our view, *si* is not responsible itself for the reduction of a binary predicate into a unary one, but it is rather a marker showing that such an operation did take place. However, we share with Reinhart & Siloni the view that *si* has a role in the syntax, and that its function is connected to the intransitivity of the verbs it combines with. Also, if we include lexical reciprocals in the discussion, it seems that *si* can combine with either binary or unary (lexical reciprocal) predicates. Accordingly, when the Voice position is available, *si* necessarily needs to be spelled out, even if the verb has a lexical reciprocal entry. Therefore, the use of *si* is twofold: it appears both with unary and binary predicates. However, note that this possibility does not lend support to a “syncretism” of *si*, as claimed by Doron & Roppart Hovav (2009). Although *si* combines with different types of predicates, its function does not change: in both cases it marks the verb as being unary.

³⁰ The only difference lies in the ambiguity with reflexivity of (59), which is ruled out by *a vicenda* in (60). However, the type of reciprocal event described by the two sentences is the same: in both case it is reducible to different sub-events.

To conclude, we provided evidence for both lexical and grammatical reciprocity to exist in Italian. Both strategies appear with *si*, a syntactic marker of intransitivity which does not carry semantic information about reciprocity. In the case of lexical reciprocals, the reciprocal meaning is carried by the verbs' meaning, while grammatical reciprocity is due to the grammatical reciprocal operator *a vicenda*. These generalizations do not only contribute to the investigation of lexical reciprocity, by showing its existence in Italian, but they also shed some light on the realization of grammatical strategies and the role of *si*.

Chapter 5

Conclusions

In this thesis, we investigated lexical and grammatical reciprocity in Italian, a language where these two strategies seem indistinguishable on the surface: in finite clauses, if the subject is plural, any transitive verb requires the same structure to generate reciprocal meanings (plural subject + *si* + verb).

In order to identify lexical reciprocity, we used different diagnostics. First, we looked at the causative construction. We illustrated that although in this construction *si* is disallowed, a restricted set of transitive verbs can nevertheless generate a reciprocal reading. Secondly, we showed that the same set of verbs also allow a collective reading with morpho-syntactically singular group NPs (more specifically, with the group NP *il comitato* ‘the committee’). Finally, we took a sample of these verbs and tested their acceptability in the discontinuous reciprocal construction, through a questionnaire filled in by native speakers. It emerged that the verbs identified with the two previous diagnostics have a higher acceptability than other transitive verbs. We claimed that the behavior of this set of verbs is attributable to the presence of a lexical reciprocal entry. Crucially, we also illustrated that across the aforementioned constructions, these verbs only allow an irreducible interpretation, i.e. an interpretation that cannot be reduced to multiple unidirectional relations.

In relation to grammatical reciprocity, we proposed that for what concerns transitive verbs, grammatical reciprocal meanings in Italian can be due to the reciprocal operator *a vicenda*. We also proposed that *si* is a syntactic marker of intransitivity that does not carry semantic information about reciprocity. Grammatical reciprocity, moreover, can be a covert process: in finite clauses *a vicenda* is not necessarily spelled out, and in such a case grammatical reciprocity can be licensed by the intransitivity marker *si*. This explains the lack of a visible distinction between grammatical and lexical reciprocity: both strategies have the same realization in finite clauses.

We have shown that also lexical reciprocals, if combined with *a vicenda*, generate an interpretation associated with grammatical reciprocity, i.e. reducible to multiple unidirectional

events. Using different Italian lexical reciprocals, we exemplified and compared the interpretations generated by these two different strategies, revealing a difference in the truth-value of sentences with grammatical or lexical reciprocity in different contexts.

This work, therefore, not only provided evidence for lexical reciprocity to be encoded in the Italian lexicon, but it also contributed to a clearer semantic identification of lexical and grammatical reciprocity in relation to the type of event denoted.

Our discussion also has implications for the structural realization of reciprocal constructions across all the languages that, similarly to Italian, make use of the clitic *si/se*. Further research might focus on the analysis of such languages, in order to test our proposal that *si/se* is a marker of intransitivity and that reciprocal meanings are expressed by a reciprocal operator. The extension of the analysis to other languages might also lead to the identification of a set of verbs that have a lexical reciprocal entry cross-linguistically, with potential implications for the relation between grammar and collective concepts.

This thesis focused on Italian and was restricted to verbs, with particular attention to transitive verbs. It would indeed be decisive to extend the analysis to predicates other than verbs, to find out to what extent lexical reciprocity is also encoded in nouns and adjectives.

Although we restricted our attention to Italian verbs, we reached conclusions about reciprocity in this language, with relevant generalizations for the semantics and the morpho-syntax. An extension of our proposal to other predicates and languages would bring a significant contribution to the study of reciprocal meanings cross-linguistically.

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Appendix A

Sentences used in the questionnaire

Verb	Sentence	Translation
<i>Sposare</i> ‘to marry’	<i>Marco si è sposato con Sara</i>	Marco SI married with Sara
<i>Notare</i> ‘to notice’	<i>Marco si è notato con Sara</i>	Marco SI noticed with Sara
<i>Abbracciare</i> ‘to hug’	<i>Marco si è abbracciato con Sara</i>	Marco SI hugged with Sara
<i>Arrabbiarsi</i> ‘to get angry’	<i>Marco si è arrabbiato con Sara</i>	Marco SI got angry with Sara
<i>Stufarsi</i> ‘to get fed up’	<i>Marco si è stufato con Sara</i>	Marco SI got fed up with Sara
<i>Stringere la mano</i> ‘to shake hand’	<i>Marco si è stretto la mano con Sara</i>	Marco SI shook hand with Sara
<i>Incontrare</i> ‘to meet’	<i>Francesco si è incontrato con Lucia</i>	Francesco SI met with Lucia
<i>Seguire</i> ‘to follow’	<i>Francesco si è seguito con Lucia</i>	Francesco SI followed with Lucia
<i>Baciare</i> ‘to kiss’	<i>Francesco si è baciato con Lucia</i>	Francesco SI kissed with Lucia
<i>Presentarsi</i> ‘to show up’	<i>Francesco si è presentato con Lucia</i>	Francesco SI showed up with Lucia
<i>Leggere un libro</i> ‘to read a book’	<i>Francesco si è letto un libro con Lucia</i>	Francesco SI read a book with Lucia
<i>Guardare un film</i> ‘to watch a film’	<i>Francesco si è guardato con Lucia</i>	Francesco SI watched a film with Lucia
<i>Conoscere</i> ‘to know’	<i>Matteo si conosce con Veronica</i>	Matteo SI is acquainted with Veronica
<i>Coccolare</i> ‘to cuddle’	<i>Matteo si coccola con Veronica</i>	Matteo SI cuddles with Veronica
<i>Evitare</i> ‘to avoid’	<i>Matteo si evita con Veronica</i>	Matteo SI avoids with Veronica
<i>Sopportare</i> ‘to put up with’	<i>Matteo si sopporta con Veronica</i>	Matteo SI puts up with Veronica

<i>Esibirsi</i> ‘to perform’	<i>Matteo si esibisce con Veronica</i>	Matteo SI performs with Veronica
<i>Ringraziare</i> ‘to thank’	<i>Andrea si è ringraziato con Giulia</i>	Andrea SI thanked with Giulia
<i>Spaventarsi</i> ‘to get scared’	<i>Andrea si è spaventato con Giulia</i>	Andrea SI got scared with Giulia
<i>Implorare</i> ‘to implore’	<i>Andrea si è implorato con Giulia</i>	Andrea SI implored with Giulia
<i>Telefonare</i> ‘to phone’	<i>Andrea si è telefonato con Giulia</i>	Andrea SI phoned with Giulia
<i>Fare la doccia</i> ‘to shower’	<i>Andrea si è fatto la doccia con Giulia</i>	Andrea SI showered with Giulia
<i>Salutare</i> ‘to greet’	<i>Andrea si è salutato con Giulia</i>	Andrea SI greeted with Giulia
<i>Guardare negli occhi</i> ‘to look in the eyes’	<i>Alessandro si è guardato negli occhi con Chiara</i>	Andrea SI looked in the eyes with Giulia
<i>Scrivere</i> ‘to write’	<i>Alessandro si è scritto con Chiara</i>	Andrea SI wrote with Giulia
<i>Scoprire</i> ‘to discover’	<i>Alessandro si è scoperto con Chiara</i>	Andrea SI found out with Giulia
<i>Insultare</i> ‘to insult’	<i>Alessandro si è insultato con Chiara</i>	Andrea SI insulted with Giulia
<i>Guardare un film</i> ‘to watch a film’	<i>Alessandro si è guardato un film con Chiara</i>	Andrea SI watched a film with Giulia
<i>Inseguire</i> ‘to chase’	<i>Alessandro si è inseguito con Chiara</i>	Andrea SI chased with Giulia

Appendix B

Verbs used in the questionnaire

Experimental items	Control items	Filler items
<i>Notare</i> ‘to notice’	<i>Sposare</i> ‘to marry’	<i>Spaventarsi</i> ‘to get scared’
<i>Abbracciare</i> ‘to hug’	<i>Incontrare</i> ‘to meet’	<i>Stufarsi</i> ‘to get fed up’
<i>Seguire</i> ‘to follow’	<i>Fare la doccia</i> ‘to shower’	<i>Presentarsi</i> ‘to show up’
<i>Insultare</i> ‘to insult’	<i>Arrabbiarsi</i> ‘to get angry’	<i>Scrivere</i> ‘to write’
<i>Baciare</i> ‘to kiss’	<i>Esibirsi</i> ‘to perform’	<i>Conoscere</i> ‘to know’
<i>Guardare</i> ‘to look’		<i>Scoprire</i> ‘to discover’
<i>Coccolare</i> ‘to cuddle’		<i>Leggere un libro</i> ‘to read a book’
<i>Sopportare</i> ‘to put up with’		<i>Guardare un film</i> ‘to watch a film’
<i>Ringraziare</i> ‘to thank’		<i>Telefonare</i> ‘to phone’
<i>Implorare</i> ‘to implore’		<i>stringere la mano</i> ‘to shake hand’
<i>Evitare</i> ‘to avoid’		
<i>Salutare</i> ‘to greet’		
<i>Guardare negli occhi</i> ‘to look in the eyes’		
<i>Inseguire</i> ‘to chase’		