

Lexical reciprocity vs. grammatical reciprocity: the case of Italian

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Two common cross-linguistic strategies give rise to reciprocity. In the lexical (L) strategy, reciprocity is due to the specific meanings of intransitive entries like *meet*, *marry* and *kiss*. Another strategy involves reciprocal operators. Unlike L-reciprocity, this grammatical (G) strategy is productive: reciprocal items like *each other* occupy NP positions within complex VPs where the verb has no reciprocal meaning, as seen in *punish each other*, *run after each other* or *consider each other guilty*.

English distinguishes L and G reciprocity on the surface as in *Sue and Dan met (each other)*. Similar surface distinctions appear in Russian, Dutch, Hebrew and Arabic (*inter alia*). By contrast, Romance languages, German, Serbo-Croatian and Czech (*i.a.*) have reciprocal forms that do not immediately lend support to either an L or a G analysis. For instance, the surface forms of the Italian examples (1a) and (1b) look identical. However, as the glosses show, (1a), but not (1b), has two reciprocal readings:

- (1) a. Gianni e Maria si sono lasciati/consultati b. Gianni e Maria si sono puniti /ringraziati
 G and M SI are left /consulted G and M SI are punished /thanked
 (1a): 2-event reading ('G&M left/consulted each other') or 1-eventreading ('G&M broke up/conferred')
 (1b): only a 2-event reading – 'G&M punished/thanked each other'

The study of Romance languages has led to intriguing hypotheses about cross-linguistic variations in the expression of reciprocity [9,5,*i.a.*]. However, while evidence suggesting two strategies as in (1a) has been occasionally observed, the little theoretical work that has been done on the topic has not been systematically applied to account for the differences between the two strategies.

This paper studies new evidence on L/G reciprocity in Italian, supporting the treatment of the clitic *si* as a purely syntactic licenser of intransitivity (cf. [7,10,1] on other languages). Reciprocal meanings are derived by specific lexically collective verbs or by a general grammatical mechanism: a covert operator licensed by *si* or an overt adverbial (*a vicenda* 'mutually/in turns'). L-reciprocity is analyzed using irreducible events [4], while G-reciprocity involves a quantificational operator [3] taking scope over different events. This systematically accounts for the distribution of different reciprocal meanings with causatives, the preposition *con* ('with'), and the adverbial *a vicenda*.

The L/G distinction between Italian reciprocals is supported by four tests:

(T1) Following [4,11], we observe that verbs with an L-reciprocal reading lead to ambiguity between one/two-event readings (1a), while other transitives only support a 2-event reading (1b). The adverb *a vicenda* acts as a disambiguator that selects the 2-event reading: unlike (1a), the sentence *G e M si sono lasciati a vicenda* is unambiguous ('G&M left each other') and isn't true if Gianni left a passive Maria.

(T2) Causatives (2) rule out *si*, allowing passive readings for all transitives. By contrast, reciprocity appears with verbs that have an L-reciprocal reading (2a), but not with other transitives (2b):

- (2) a. Ho fatto lasciare/consultare Gianni e Maria b. Ho fatto punire/ringraziare Gianni e Maria
 have_{1sg} made leave /consult G and M have_{1sg} made punish/thank G and M
 Passive: (2a)= 'I made G and M be left/consulted' (2b)= 'I made G and M be punished/thanked'
 L-recip.: 'I made G and M break up/confer' × (no L-recip reading)
 *G-recip.: × 'I made G&M leave/consult each other' × 'I made G&M punish/thank each other'

(T3) Similarly to English ('the couple broke up/*has punished each other'), L-reciprocity appears with singular terms like *coppia* 'couple' (3a), while G-reciprocity is unacceptable in the singular (3b):

- (3) a. la coppia si è lasciata/consultata b. #la coppia si è punita/ringraziata
 the couple SI is left /consulted the couple SI is punished/thanked
 (3a) = 'the couple broke up/?left itself / conferred/?consulted itself'
 (3b) = '?the couple punished/thanked itself'

(T4) As in Hebrew [11], L-reciprocals support discontinuity (4a), but simple transitives do not (4b):

- (4) a. Gianni si è lasciato/consultato con Maria b. *Gianni si è punito/ringraziato con Maria
 G SI is left /consulted with M G SI is punished/thanked with M
 'G broke up/conferred with M'

These tests identify many L-reciprocal verbs like *consultarsi* 'consult', *scontrarsi* 'collide', *sposarsi* 'marry', *battersi* 'battle', and, in some varieties, *baciarsi* 'kiss' and *abbracciarsi* 'hug'.

The purely syntactic function of *si*. We propose that *si* is an intransitivity marker that does not carry any specific meaning. This proposal is supported by contrasts as the one between (5) and (6):

- (5) G e M *si*/* \emptyset puniscono a vicenda (6) Ho (**si*) fatto (**si*) punire (**si*) G e M a vicenda
 G and M SI punish mutually have.1sg made punish G and M mutually
 ‘G&M punish each other (in turns)’ ‘I have made G&M punish each other (in turns)’

In main clauses, *a vicenda* only appears with *si* (5). However, surprisingly, in causative clauses, *a vicenda* derives G-reciprocity without *si* (6). Unlike (5), *a vicenda* in (6) is necessary for G-reciprocity (cf. (2b)). If *si* and *a vicenda* both carried a G-reciprocal meaning that saturated an argument similar to *each other*, one of them must have been ruled out in (5). Alternatively, if *si* but not *a vicenda* denoted such a reciprocal saturator, no G-reciprocal reading would be expected when *si* is absent as in (6). We conclude, in agreement with [7]’s analysis of French *se*, that *si* is a purely syntactic marker of intransitivity, which resides in Voice. Reciprocal meanings are carried by an L-reciprocal verbal meaning (2a,3a,4a) or by a G-reciprocal operator. In matrix clauses, the G-operator is covert (1b) or overt (*a vicenda* in (5)). Covert reciprocity in (1b) is licensed by *si*, which must be spelled out in main clauses due to the availability of a Voice position. In causatives, the absence of *si* makes covert G-reciprocity impossible (2), but overt G-reciprocity (*a vicenda*) is still allowed (6).

Semantics. Three semantic properties distinguish L-reciprocity from G-reciprocity: one-event readings (T1), acceptance of singular number (T3), and discontinuous constructions (T4). All three properties are accounted for following [4]’s proposal that L-reciprocals, like all lexical collectives, involve predication over single events, whereas G-reciprocity involves event quantification. Formally, we use a Davidsonian framework where an L-reciprocal verb like *lasciarsi* has two readings:

break_up: an L-reciprocal unary predicate over events and singular/plural entities, or, isomorphically, a function of type $\varepsilon(\hat{e}t)$ – from events to functions from singular/plural entities to truth-values

leave: a transitive binary predicate over events and pairs of singularities, or, isomorphically, a function of type $\varepsilon(e(et))$

Crucially, the events of type ε that these denotations range over are irreducible: if they include subevents with relevant properties, these subevents are not accessible for grammatical operators. One-event readings (T1) of sentences like (1a) are modelled by the $\varepsilon(\hat{e}t)$ reading of the verb:

$\exists e.$ **break_up**($e, g+m$) - there is an event e where the **break_up** predicate holds of the sum $g+m$
 2-event reciprocity with transitives is obtained by a G-reciprocity operator, mapping binary predicates over atoms to $\hat{e}t$ predicates over pluralities. An event-based version of strong-reciprocity [3] is:

REC = $\lambda R_{\varepsilon(e(et))}.\lambda x_{\hat{e}}.\forall y_e \in x.\forall z_e \in x.y \neq z \rightarrow \exists e.R(e,y,z)$ = denotation of covert reciprocity/*a vicenda*
 In REC, quantification over members of the plurality x takes scope over the event quantifier. Accordingly, transitives, possibly with *a vicenda*, lead to a two-event reading as in (1a):

REC(**leave**)($g+m$) = $\forall y \in g+m.\forall z \in g+m.y \neq z \rightarrow \exists e.\mathbf{leave}(e,y,z)$ = $\exists e.\mathbf{leave}(e,g,m) \wedge \exists e.\mathbf{leave}(e,m,g)$
 = there is an event in which G left M, and there is a (possibly different) event where M left G.

Availability of singular number (T3) as in (3a) is modeled as a lexical property of L-reciprocal entries like **break_up**, formalized using the following meaning postulate:

$$\forall e.\forall x_e.\forall y_e.\forall z_e. [\mathbf{break_up}(e,y+z) \wedge x = \uparrow(y+z)] \rightarrow \mathbf{break_up}(e,x)$$

= every breakup of a sum $y+z$ constitutes a breakup of any impure atom x [8] made of that sum

This predicts singular impure atoms in L-reciprocal readings, like the atom denoted by *la coppia* in (3a). By contrast, the collective predicate derived by the REC operator does not embody any predication over impure atoms. This accounts for the lack of G-reciprocity in (3a) and (3b).

Discontinuous reciprocity with *con* (T4) is analyzed using event modification. The preposition *con* adds a participant to the agent in any one-place predicate P over events and pluralities (cf. [11]):

CON = $\lambda x_e.\lambda P_{\varepsilon(\hat{e}t)}.\lambda e'.\lambda y_e.P(e',x+y)$ = CON(x') is a function that adds x' to the y argument of P
 L-reciprocal meanings like **break_up** (4a) are directly modified by *con* without a reciprocal operator:

$$\exists e.(\mathbf{CON}(m)(\mathbf{break_up}))(e,g) = \exists e.(\lambda e'.\lambda y_e.\mathbf{break_up}(e',m+y))(e,g) = \exists e.\mathbf{break_up}(e,m+g)$$

By contrast, in (4b), to obtain reciprocity, the REC operator takes scope over the existential closure of the event, like other quantifiers [6]. Since CON(m) (=denotation of *con Maria*) takes an argument of type $\varepsilon(\hat{e}t)$, it applies neither to the input of REC (type $\varepsilon(e(et))$ nor to its output (type t). In a fuller system, the meaning of REC is detached from existential closure, to allow event modification in cases like *they hit each other in the garden*. This is obtained using the proposal in [2], preserving our account of discontinuous *con* reciprocals.

References

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