

A first incursion into the Spanish obviative system

Luis Vicente
Universität Potsdam
vicente@ling.uni-potsdam.de

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Spanish has three DP-internal obviative elements, whose function is to indicate that their containing DP must be interpreted as referentially disjoint with some other DP in the discourse. These elements are:

- **más** ‘more’ — an uninflectable additive particle that (on this usage) always appears at the right edge of DP.
- (1) Alicia ha leído un libro **más**.
Alicia has read a book more
“Alicia has read an additional book”
- **diferente** ‘different’ — an adjective. Like all adjectives ending in *-e*, it only inflects for number (*diferente/diferentes*). It is synonymous with *distinto*, both of which appear exclusively in a postnominal position.
- (2) Alicia ha leído un libro **diferente**.
Alicia has read a book different
“Alicia has read a different book”
- **otro** ‘other’ — a determiner, inflecting both for number and gender (*otro/otra/otros/otras*).
- (3) Alicia ha leído **otro** libro.
Alicia has read other book
“Alicia has read another book”

Out of these three, *otro* is an interesting one in that, besides its purely obviative use, it is also an integral part of reciprocal expressions.

- (4) Alicia y Beatriz hablaron la una con la **otra**.
Alicia and Beatriz talked the one with the other
“Alicia and Beatriz talked to each other”

Plan for today:

To figure out the basic semantics of *otro* and its role in reciprocal constructions. The interactions with *diferente* and *más*, while interesting, will have to wait for another talk.

1 Basic syntax of *otro*

It is reasonable to treat *otro* as part of the determiner system. As regular determiners, it necessarily precedes numerals and pronominal adjectives.

- (5) a. { estos / los / **otros** } dos libros
 these the other two books
 b. * dos { estos / los / **otros** } libros
 two these the other books
- (6) a. { estos / los / **otros** } fascinantes libros
 these the other amazing books
 b. * fascinantes { estos / los / **otros** } libros
 amazing these the other books

Otro, however, necessarily follows demonstratives, quantifiers, and definite articles.

- (7) a. { muchos / estos / todos / los / ningún / algunos } **otro(s)** libro(s)
 many these every the no some other book(s)
 b. * **Otro(s)** { muchos / estos / todos / los / ningún / algunos } libro(s)
 other many these every the no some book(s)

Finally, *otro* is in complementary distribution with the indefinite article *un* 'a', independently of their relative linear order.

- (8) a. * Un **otro** libro
 a other book
 b. * **Otro** un libro
 other a book

All of this means that *otro* sits above NP and NumP, but still in a relatively low position within the D system.

2 Exploring the semantics of *otro*

2.1 *Otro* is an indefinite

Various properties of *otro* point towards treating it as an indefinite. To begin with, it exhibits specific/nonspecific ambiguities.

- (9) a. Alicia quiere leer **otro** libro, pero no ha decidido cuál
 Alicia wants read other book but not has decided which
 b. Alicia quiere leer **otro** libro, concretamente, *Aspectos*
 Alicia wants read other book specifically, Aspects

Second, it can antecede donkey pronouns, like regular indefinites, but unlike universal or definite NPs.

- (10) a. Every farmer who owns a donkey beats it.
 b. * Every farmer who owns every donkey beats it.
 c. # Every farmer who owns the donkey beats it.
 [grammatical only in the non-covariant reading]
- (11) Todo estudiante que pide **otra** oportunidad acaba desperdiciandola
 every student who requests other chance ends.up throwing.away.CL

Finally, as regular indefinites, *otro* lacks quantificational force of its own (Heim 1982), hence it inherits the quantificational force of other operators.

- (12) a. *Sometimes*, if a_i cat falls from the fifth floor, it_i survives
 \simeq Some cats that fall from a fifth floor survive
 b. If a_i man falls from the fifth floor, he_i *very rarely* survives
 \simeq Very few men who fall from fifth floor survive
- (13) a. *A veces*, si Alicia pide **otra_i** oportunidad, *pro* se la_i concedemos
 occasionally, if Alicia requests other chance we CL CL grant
 \simeq Some of the other chances requested by Alicia are granted.
 b. *En muchas ocasiones*, si Alicia pide **otra_i** oportunidad, *pro* se la_i concedemos
 in many occasions if Alicia requests other chance we CL CL grant
 \simeq Most of the other chances requested by Alicia are granted.
 c. Si Alicia pide **otra_i** oportunidad, *bajo ninguna circunstancia* *pro* se la_i
 if Alicia requests other chance under no circumstance we CL CL
 concedemos
 grant
 \simeq No chance requested by Alicia in granted.

Generalization I

Otro is an indefinite expression.

2.2 *Otro* is an anti-anaphoricity marker

At first sight, German *anders* might look similar to *otro*. It is easy to show that it is not, though. Beck (2000) argues that, when under the scope of a universal/distributive quantifier, *anders* is ambiguous between a Q-bound reading and what Beck calls a discourse anaphoric reading (though, properly, it should be a discourse *anti*-anaphoric reading).

- (14) *Ambiguity of 'anders'*
 Jeden Junge hat ein **anderes** Buch gekauft.
- a. ✓ Q-bound reading: every boy bought a book different from the book that every other boy bought.
 b. ✓ Discourse anaphoric reading: every boy bought a book different from some salient book.

In Spanish, however, only the discourse anaphoric reading is available. The Q-bound reading can only be expressed through a circumlocution (16).

(15) *Non-ambiguity of 'otro'*

Cada chico ha comprado **otro** libro
 each boy has bought other book

- a. * Q-bound reading: every boy bought a book different from the book that every other boy bought.
- b. ✓ Discourse anaphoric reading: every boy bought a book different from some salient book.

(16) Cada chico ha comprado un libro diferente al de los otros chicos.
 each boy has bought a book different to.the of the other boys

However, the discourse anaphoric reading still allows for what appears to be a distributive and a non-distributive interpretation, as expected if it is an indefinite expression.

(17) *Distributivity and 'otro'*

Cada chico ha comprado **otro** libro
 each boy has bought other book

- a. Distributive discourse anaphoric reading: for every boy, he has bought a book different from the one he had bought previously.
- b. Non-distributive discourse anaphoric reading: every boy bought a book different from some salient book.

In her article, Beck also discusses a third reading, which she calls “reciprocal”. This reading doesn’t exist with *andere*, and instead requires *verschieden*.

- (18) a. Frank und Bärbel mögen **verschiedene** Bücher.
 “Frank and Bärbel like books that are different from each other”.
- b. Frank mag **verschiedene** Bücher.
 “Frank likes books that are different from each other”

However, *otro* cannot give rise to a reciprocal reading (note that the following examples are still grammatical in the discourse anaphoric reading).

- (19) a. * Alicia y Beatriz han comprado **otros** libros.
 Alicia and Beatriz have bought other books
 [intended] “The books that Alicia and Beatriz bought are different from each other”
- b. * Alicia ha comprado **otros** libros.
 Alicia has bought other books
 [intended] “The books that Alicia bought are different from each other”

The meaning of *otro* is very close, if not identical, to the meaning of the switch-reference markers found in several Oceanic and North American languages (abstracting away from important morphosyntactic differences). Here is an example from Amele (Papua New Guinea).

(20) *Stirling (1993)*

uqa ho-**co**-b sab je-i-a
 3SG come.DS.3SG food eat.3SG
 “He_i came and he_{*i/k} ate the food”

The same type of obligatory disjoint reference can be attained with *otro*.

- (21) Él vino y **otra** persona se comió la comida
 he came and other person SE ate the food
 “He_i came and he_{*i/k} ate the food”

Generalization II: meaning of *otro*
Otro only has a discourse anti-anaphoric reading.

2.3 Interactions of *otro* with pluralities

Consider this toy model, where two people travel to a number of countries.

<i>Toy Model #1</i>	
Alicia	Beatriz
Argentina	Belgium
Australia	Bolivia
Andorra	Brazil

Given this model, the following sentence is true.

- (22) Alicia ha viajado a Argentina, Australia, y Andorra, y Beatriz ha viajado a
 Alicia has travelled to Argentina Australia and Andorra and Beatriz has travelled to
 otros países.
 other countries.

So far, nothing surprising: since Alicia’s countries do not coincide with Beatriz’s, there is a licit environment for the anti-anaphoric requirement of *otro*. Consider now a minimally different model, where both sets of countries share a member.

<i>Toy Model #2</i>	
Alicia	Beatriz
Argentina	Belgium
Australia	Bolivia
Colombia	Colombia

Surprisingly, Model #2 makes (22) come out as false.

- (23) # Alicia ha viajado a Argentina, Australia, y Colombia, y Beatriz ha viajado
 Alicia has travelled to Argentina Australia and Colombia and Beatriz has travelled
 a otros países.
 to other countries.

Another example, to make the same point (this example is also # in English, Craig Thiersch, p.c.):

- (24) #El profesor nos dijo que *SPE* lo escribieron Chomsky y Lasnik. En realidad, lo the lecturer CL told that *SPE* CL wrote Chomsky and Lasnik. In reality, CL escribieron otras personas.
wrote other people
“The lecturer told us that *SPE* was written by Chomsky and Lasnik. In reality, it was written by other people (namely, Chomsky and Halle)”

This much suggests that *otro* does not introduce a simple non-identity requirement, because the two sets of countries in Model #2 count as non-identical. Rather, *otro* introduces a requirement that the intersection of the pivot set and the antecedent set is an empty set. Wrt the examples in the previous sections, we can assume that individuals are interpreted as singleton sets.

However, things are actually even more complicated. Consider now a different Toy Model, where the second set of countries is a proper superset of the first set of countries.

<i>Toy Model #3</i>	
Alicia	Beatriz
Argentina	Argentina
Australia	Australia
Andorra	Andorra
	Belgium
	Bolivia

Somewhat surprisingly, our original sentence (22) is acceptable in this model, if modified by *también* ‘also’.

- (25) Alicia ha viajado a Argentina, Australia, y Andorra, y Beatriz también ha Alicia has travelled to Argentina Australia and Andorra and Beatriz also has viajado a otros países.
travelled to other countries.

Here is a different example to make the same point.

- (26) A lo largo de su historia, el Athletic sólo ha ganado la Liga y la Copa. El during of its history the Athletic only has won the League and the Cup. The Barcelona, en cambio, también ha ganado otros trofeos.
Barcelona, on the other hand, also has won other trophies
“Through the years, Athletic has only managed to win the Spanish League and Spanish Cup competitions. On the other hand, Barcelona has managed to win other competitions on top of the League and the Cup”

The obligatory presence of *también* is very revealing. It suggests that we are contrasting the whole of the first set with its complement in the superset. Since these two sets don’t overlap, our generalization still holds. What *también* is doing is signaling that these two sets are in a [subset-complement] relation.

To finish with this section, consider a variant of the previous case, in which the first set doesn’t have any members. A sentence like (27) is infelicitous. What this example seems to be telling us is that it is not possible to satisfy the non-overlap requirement trivially by having one of the sets be empty.

<i>Toy Model #4</i>	
Alicia	Beatriz
	Belgium
	Bolivia
	Brazil

- (27) # Alicia no ha viajado a ningún país, pero Beatriz ha viajado a otros países.
 Alicia not has travelled to any country but Beatriz has travelled to other countries

Generalization III: pivot-antecedent relation

Otro requires that the intersection of the pivot and the antecedent result in an empty set, but not trivially so.

3 Figuring out where the meaning of *otro* stems from

When one says (3), one is essentially saying (28).

- (3) Alicia ha leído **otro** libro.
 Alicia has read other book
 “Alicia has read another book”
- (28) a. There is a book, which has been read by Alicia.
 b. The current discourse file already contains a card for a book.
 c. The book mentioned in the sentence and the one already present in the discourse are not the same book (technically, the assignment function maps them to different individuals).

Where does this meaning come from? This is an important question because it directly determines the shape of the lexical entry of *otro*.

- If what we have in (28) is a conversational implicature, it should be derivable from Grice’s maxims. In this case, the lexical entry for *otro* would consist of whatever is minimally necessary to make it an indefinite expression.
- On the other hand, if the meaning in (28) is a presupposition or an at-issue entailment (i.e., part of the assertion), then it should be encoded directly into the lexical entry of *otro*.

3.1 The meaning of *otro* is not a conversational implicature

One of the major properties of conversational implicatures is *non-detachability* –i.e., minor lexical and syntactic manipulations of the sentence do not eliminate the implicature, because implicatures are not tied to the specific lexicon or structure of the sentence. All of the following can be interpreted as commands to the addressee.

- (29) a. Can you pass me the salt/pepper/water/bread/ice cream?
 b. Can you throw me the salt/let me have the salt/send the salt my way?
 c. It’d be nice if you could pass me the salt.

In contrast, the pieces of meaning in (28) require the presence of *otro* in all cases. In fact, (30) is not equivalent to (3), which shows that one cannot simply take a lone indefinite and get the meaning of (28) by implicature.

- (30) Alicia ha leído **un** libro
Alicia has read a book

Another salient property of conversational implicatures is that they can be cancelled with relative ease:

- (31) *Context: the salt is on the top shelf, but I suspect you are just not tall enough to reach it.*
Can you pass me the salt?

However, this is not possible with *otro*: when one says *otro libro*, there is no way of getting around the fact that there are two separate books. Regular indefinites don't give rise to this problem.

- (32) a. # Alicia estaba leyendo otro libro, pero *pro* era el mismo libro.
Alicia was reading other book but it was the same book
b. Alicia estaba leyendo un libro ayer, y hoy *pro* también estaba leyendo un libro, pero *pro* era el mismo libro.
Alicia was reading a book yesterday and today she also was reading a book but it was the same book

3.2 The meaning of *otro* is not a presupposition

The defining property of presuppositions is that they survive when embedded under negation and questions.

- (33) a. I have met Steve's daughter.
[\Rightarrow Steve has a daughter]
b. I haven't met Steve's daughter.
[\Rightarrow Steve has a daughter]
c. Have you met Steve's daughter?
[\Rightarrow Steve has a daughter]

Sentences containing *otro* and a sentential negation are three-way ambiguous.

- (34) Alicia **no** ha leído **otro** libro
Alicia not has read other book

- (35) *Possible readings of (34)*

- a. Alicia read a book in the past (the one corresponding to the existing file card), but hasn't read any books since.
b. Alicia read a book, but she hadn't read any books prior to that, so at the time of utterance there is no existing card in the current file.
c. Alicia read a book, and she also read a book in the past, but both happen to be the same book.

In all three cases, we are losing the entailment that there exist two separate books. The same happens when we subject *otro* to the questioning test.

(36) ¿Ha leído Alicia **otro** libro?
has read Alicia other book

(37) *Possible readings of (36)*

- a. Alicia read a book in the past (the one corresponding to the existing file card), and I'm wondering if she has read any books since.
- b. Alicia has read a book, and I'm wondering if there is an additional file card corresponding to any prior book she might have read.
- c. Alicia has read a book, and she also read a book in the past, and I'm wondering if they are the same book.

As with the negation test, we lose the entailment that there exist two separate books. This suggests that *otro* does not trigger a presupposition.

3.3 The meaning of *otro* might be an at-issue entailment

The major difference between presuppositions and at-issue entailments is that presuppositions are backgrounded –i.e., they don't contribute directly to the primary communicative goal of their containing sentence. *Otro* does not seem to behave in this way, though so far I haven't been able to construct a good example to show this.

Generalization IV: the meaning of *otro*

The aspect of meaning contributed by *otro*—i.e., (28)— do not arise via conversational implicature, nor are they presuppositions. Very likely, they are at-issue entailments (part of the assertion), hence they should be encoded directly into the lexical entry of *otro*.

4 Interim summary

So far, we have figured out the following.

- *Otro* is an indefinite expression (section 2.1).
- *Otro* is an anti-anaphoricity marker (section 2.2).
- *Otro* calls for non-overlapping sets, rather than non-identical individuals, though the non-overlap cannot be trivial due to one of the sets being empty (section 2.3).
- The meaning of *otro* is not a conversational implicature, hence it must be encoded directly into its lexical entry (section 3).

5 A lexical entry for *otro*

At first, it might be tempting to define *otro* simply in terms of its anti-anaphoricity reading, e.g.:

(38) $[[\textit{otro}]] = \lambda x.\lambda y.[x \cap y \neq \emptyset]$

This is clearly wrong, because it simply requires the DP containing *otro* to be referentially disjoint with something in the previous discourse, which is always trivially true. Specifically, (38) would license the following discourse, with *Beatriz* functioning as a discourse antecedent to *otro libro*.

- (39) # Alicia ha hablado con Beatriz_i, y Cristina ha leído otro_i libro.
Alicia has talked with Beatriz and Cristina has read other book

What we need to ensure is that the same property holds of both the *otro*-containing DP and its antecedent. We can do that by specifying a third lambda term encoding said property.

- (40) $[[\text{otro}]] = \lambda P.\lambda x.\lambda y.[[P(x) = 1] \wedge [P(y) = 1] \wedge [x \cap y \neq \emptyset]]$

This entry captures the fact that the antecedent necessarily falls into the same set as the pivot, even when this is not explicitly asserted.

- (41) a. Alicia está aquí, pero yo quiero hablar con otra profesora
Alicia is here but I want talk with other teacher
[\Rightarrow Alicia is a teacher]
b. Alicia está aquí, pero yo quiero hablar con otra enfermera
Alicia is here but I want talk with other nurse
[\Rightarrow Alicia is a nurse]

Furthermore, by explicitly declaring that $P(y) = 1$, we can also capture the fact that the antecedent cannot be an empty set (cf. the discussion around (27)). If the antecedent is the empty set, then $P(y)$ remains undefined, failing to satisfy the requirements of (40).

6 *Otro* and reciprocals

The standard analysis of reciprocity (Heim et al. 1991 *et seq*) is based on the fact that English *each other* contains the distributive quantifier *each*. Example (42a) means the same thing as (42b): in both cases, we distribute over the subject and assert that a relation R holds between each member of the subject set and a different member of the same set.

- (42) a. The boys talked to each other.
b. Each of the boys talked to another.

6.1 The basic case

However elegant, this analysis is not immediately applicable to Spanish because here reciprocity is expressed through a *el uno... el otro* ‘the one... the other’ construction, without any overt distributive elements.

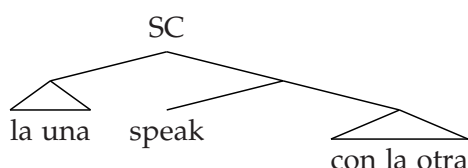
- (43) Alicia y Beatriz hablaron la una con la otra.
Alicia and Beatriz talked the one with the other

We know that *uno* is the regular indefinite determiner, so we can assign to it the same lexical entry as we did to *otro*, minus the part entailing the existence of an additional individual.

- (44) $[[\text{uno}]] = \lambda P.\lambda x.[P(x)]$

Let us assume that *el uno...el otro* forms a small clause structure, with the verb as the head (Arregi 2001).

(45) *A structure for reciprocals (first try)*

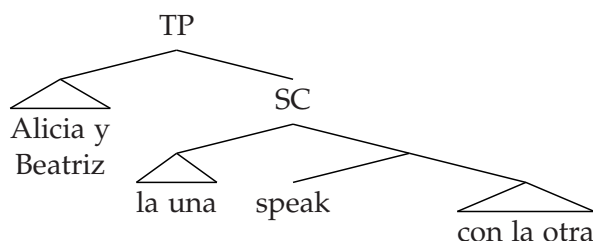


Informally, this structure can be assigned the following semantics, taking into account the presence of definite determiners embedding *uno* and *otro*.

(46) $\lambda P.\lambda x.\lambda y. [[\text{talk}(x, y)] \wedge [P(x) = 1] \wedge [P(y) = 1] \wedge [x \cap y \neq \emptyset]]$

Note that this does not give us the meaning of reciprocity: (46) means that there are two different individuals, x and y , such that x talked to y . In order to derive reciprocity, we need the plural subject.

(47) *A structure for reciprocals (first try)*



The plural subject does two things:

- it restricts the set of entities that x and y can belong to (i.e., it stands for the λP term of (40)).
- as a general result of predication over a plural subject, we get a Linlean $*$ operator pluralizing the predicate.

(48) *Distribution*

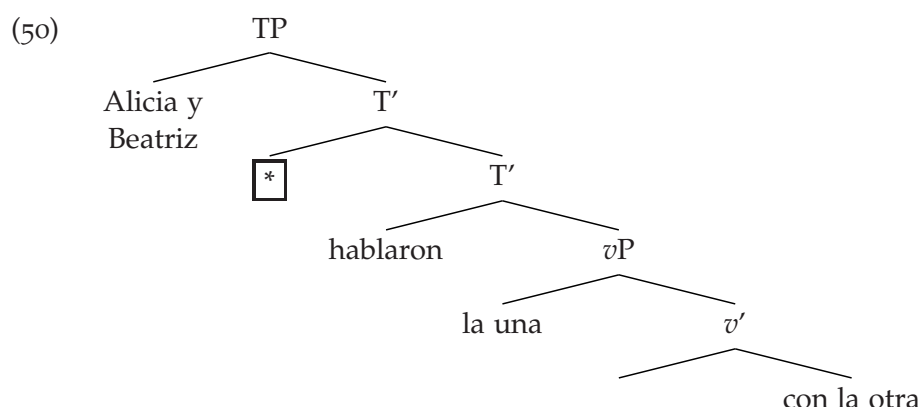
$*$ is that function $D\langle e, t \rangle \rightarrow D\langle e, t \rangle$ such that, for any f in $D\langle e, t \rangle$ and any x in D , $[*f](x) = 1$ iff

- $f(x) = 1$, or
- $\exists u, v [x = (u + v) \wedge [*f](u) \wedge [*f](v)]$

Consider how the $*$ operator applies to a simple example of plural predication.

- The children weigh 50 kgs.
- $[_{TP}[\text{The children}]*[_{VP} \text{weigh 50 kgs.}]]$
- $C \in *\lambda x[\text{weigh}(x, 50\text{kgs})]$
- $\forall x [x \in C \rightarrow \text{weigh}(x, 50\text{kgs})]$

If we try to do the same with a reciprocal sentence, we get the following.



(51) Let S be the set $\{Alicia, Beatriz\}$
 $*[\iota x \in S. \iota y \in S. [[\text{talk}(x, y)] \wedge [x \cap y \neq \emptyset]]]$

(52) $\forall x[x \in \{Alicia, Beatriz\} \rightarrow \text{talk}(\text{the } x, \text{the-other})]$

6.2 More complicated cases

Note that the *el uno... el otro* construction only works if the cardinality of the plural subject is exactly 2. If it is larger than 2, we get an ungrammatical result.

(53) ?? Alicia, Beatriz y Claudia hablaron la una con la otra
 Alicia Beatriz and Claudia talked the one with the other

(54) ?? Las cinco estudiantes hablaron la una con la otra
 the five students talked the one with the other

This is clearly the effect of the singular definite determiners in *el uno... el otro*. These determiners contribute the meaning that, for any member x of the relevant set, its complement is going to be a unique individual. There are various ways in which we can solve this conundrum.

Eliminate the determiners As a consequence, we also eliminate the ι operators and the uniqueness requirement on the complement.

(55) Alicia, Beatriz y Claudia hablaron una con otra
 Alicia Beatriz and Claudia talked one with other

(56) Let S be the set $\{Alicia, Beatriz, Claudia\}$
 $*[\lambda x \in S. \lambda y \in S. [[\text{talk}(x, y)] \wedge [x \cap y \neq \emptyset]]]$

(57) $\forall x[x \in \{Alicia, Beatriz, Claudia\} \rightarrow \text{talk}(x, \text{other})]$

Pluralize the determiners This is slightly more complicated. The fact that we are pluralizing the determiners entails that the *one... other* relation holds between a set of students and its complement. This can be formalized through the notion of *covers* (Schwarzschild 1996; Beck 2001), which are essentially contextually defined partitions of a set. Iterate it enough times and you get reciprocity.

- (58) Las cinco estudiantes hablaron las unas con las otras
 the five students talked the ones with the others
- (59) Let S be the set {Alicia, Beatriz, Claudia, Diana, Elena}
 $*[\lambda x \in S. \lambda y \in S. [[Cov(x, y)] \wedge [talk(x, y)] \wedge [x \cap y \neq \emptyset]]]$
- (60) $\forall x [[Cov(x) \wedge x \in \{Alicia, Beatriz, Claudia, Diana, Elena\}] \rightarrow talk(x, other)]$

7 Future plans

The long term goal is to account for all the subtypes of reciprocity discussed in Dalrymple et al. (1998) and Beck (2001). In an ideal world, everything ought to follow from a combination of the following:

- the lexical semantics of *uno* and *otro*, as outlined above.
- the different operators that embed *uno* and *otro*.
- the general theory of plural predication.
- perhaps the meaning of individual verbs.

Just to give a taste of the task, here are definitions of the subtypes of reciprocity, with some examples.

Strong reciprocity

$\forall x \in A : \forall y \in A. [y \neq x \rightarrow xRy]$

- (61) The men know each other.
 [= each man knows every other man]
- (62) Los hombres conocen cada uno a todos los otros
 the men know each one to all the others

Partitioned strong reciprocity

There is a partition PART of A such that $\forall x \in \text{PART} : \forall y \in A. [y \neq x \rightarrow xRy]$

- (63) To muddy the ballot waters further, at least four sets of propositions compete with each other. [Dalrymple et al. 1998]
- (64) Para confundir a los votantes aún más, al menos cuatro grupos de propuestas to confuse to the voters even more at least four groups of proposals competian unas con otras competed ones with others

Here is a potentially clearer example.

- (65) *Context: a wedding ceremony where several couples are married simultaneously*
 After saying their vows, the newlyweds kissed each other.
- (66) Después de darse el sí, los recién casados se besaron el uno al otro
 after of saying "I do" the newly weds SE kissed the one to.the other

Intermediate reciprocity

$$\forall x \in A : \forall y \in A. [y \neq x \rightarrow \exists z_1 \dots z_n \leq A [x = z_1 \wedge y = z_n \wedge z_1 R z_2 \wedge \dots \wedge z_{n-1} R z_n]]$$

- (67) The telephone poles are spaced five hundred feet from each other.
- (68) Los postes de teléfono están a una distancia de 150 metros uno de otro
the poles of telephore are to a distance of 150 meters one from other

Weak reciprocity

$$\forall x \in A. \exists y \in A. [x \neq y \wedge x R y] \wedge \forall y \in A. \exists x \in A. [x \neq y \wedge x R y]$$

- (69) The children gave each other a present.
- (70) Los niños se dieron un regalo unos a otros
the boys SE gave a present ones to others

One-way weak reciprocity

$$\forall x [x \in A \rightarrow \exists y [y \in A \wedge x \neq y \wedge x R y]]$$

- (71) The pirates are staring at each other.
- (72) Los piratas se están mirando unos a otros
the pirates SE are staring ones to others

Inclusive alternative ordering

$$\forall x [x \in A \rightarrow \exists y [y \in A \wedge x \neq y \wedge (x R y \vee y R x)]]$$

- (73) The plates are stacked on top of each other.
- (74) Los platos están apilados uno encima de otro
the plates are stacked one on top of other

8 Known issues

Possibly, the most important issue to be solved is that not all conceivable combinations of plurality and determiners are grammatical (Craig Thiersch, p.c.). For instance, the following example sounds quite bad, but as far as I can see, there is nothing in what I have said so far that blocks it.

- (75) ?? Las cinco estudiantes hablaron una con (las) otras
the five students talked one with the others

Here is another variant to illustrate the same point. At present, I haven't explored which combinations are possible, so there is little point in trying to make any generalizations.

- (76) ?? Las cinco estudiantes hablaron (las) unas con otra
the five students talked the ones with other

Another issue concerns collective antecedents (Thomas Wiederhold, p.c.). Apparently, antecedents that are semantically plural but trigger singular agreement cannot license reciprocals.

- (77) * El Athletic hablaron unos con otros
 the Athletic talked ones with others
 [intended: “the players of Athletic talked with each other”]

Compare to the following example.

- (78) Los jugadores del Athletic hablaron unos con otros
 the players of Athletic talked ones with others

The following pair suggests that what matters in order to license reciprocals is whether the subject triggers singular or plural agreement on the verb.

- (79) a. * Una multitud de manifestantes se enfrentó unos con otros
 a multitude of demonstrators SE fought.3SG ones with others
 b. ? Una multitud de manifestantes se enfrentaron unos con otros
 a multitude of demonstrators SE fought.3PL ones with others

Note that DPs like *una multitud de manifestantes* can trigger either singular or plural agreement, which is a presupposition upon which the previous pair depends.

- (80) a. Una multitud de manifestantes se reunió con el ministro
 a multitude of demonstrators SE met.3SG with the minister
 b. ? Una multitud de manifestantes se reunieron con el ministro
 a multitude of demonstrators SE met.3PL with the minister

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