Workshop on Cross-Linguistic Semantics of Reciprocals

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Encoding interpretive dependencies

A comment on *Scattered Reciprocals* by Filipe Kobayashi

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**1. Introduction**

Kobayashi's paper addresses a very interesting issue: The interpretation of scattered reciprocals, as in (1):

(1) Os alunos falaram **um** com a orientadora d-**o outro.**

 the students spoke one with the supervisor of-the other

 ‘The students spoke with each other’s supervisor.’

The question is:

* How to represent the dependency between the elements *um* and *o outro* in Brazilian Portuguese, which together give rise to a reciprocal interpretation.

Kobayashi's answer is given in the form of a very precise and explicit analysis.

* **My focus**: the relation between the morphosyntactic realization of reciprocals and their semantics.
* **My suggestion**: It is worthwhile to explore a more transparent relation.

The general schema Koboyashi presents is given in (2):

(2) Schema for Scattered Reciprocals

 [ Antecedent ...[ one/*um* ...[ ...other/*o outro* ...] ] ]

He convincingly shows that **i)** the dependency between the antecedent and *um* is subject to standard locality conditions, whereas **ii**) the dependency between *um* and *o outro* may cross syntactic islands.

Moreover SRs differs from English *each . . . the other(s)* sentences such as (3=7), which have a more restricted range of readings:

(3=7) The students each talked with the supervisor of the other(s).

Since syntactic movement is constrained by locality Kobayashi concludes that

**i)** follows from the analysis of **um** as a floating quantifier (the antecedent originally forms a constituent with **um** stranding the latter by moving out);

**ii)** indicates that one/**um** and other/**o outro** do not form a syntactic constituent at any point in the derivation of SRs; these two phrases are syntactically autonomous.

Kobayashi considers two approaches concerning the mapping between syntactic structures and reciprocal meanings.

* Heim et al. (1991) on *each other*: morphological complexity reflects semantic complexity: two semantic operations: distributivity and differentiation, each corresponding to one of the pieces of *each other*

 Recip = Dist + Diff

* Dalrymple et al. (1994) and Dalrymple et al. (1998): reciprocal constructions, regardless of their morphosyntax, are universally mapped to Recip, a multiply ambiguous quantifier over pairs of type (et)(eet)t. 🡪

 a single quantifier is responsible for Heim et  al.’s distributivity and differentiation.

Summary:



**Application to SRs in BP**

 **um** denotes Recip, while **o outro** is just interpreted as a variable marking the second argument of the reciprocated relation.

Kobayashi shows that in this form these approaches yield different predictions, illustrated on the basis of the sentence in (4)=(30):

(4)





These predictions are tested in (5=32/33):

(5)



It is concluded that the polyadic quantifier approach makes the correct predictions.

**2. Comments and questions**

Consider the relation between **um** and **o outro** in the approach presented. See (6=46-49)

In the initial informal sketch the distributivity and differentiation components were taken to be both located inthe position **um**. However in order to derive the ill-formedness of (46) with a pronoun **ele,** the semantics of **o outro** is enriched as in (47).

(6)





**Specific Comments and Questions**

i) This account in fact reintroduces a separate differentiation component in the position of **o outro**, making the two approaches compared in fact more similar than it might initially seem.

ii) In the final version the Recip operator does not coincide with **um**, but is introduced as a separate null element REC.

* This may be descriptively needed, but it is unclear where it comes from.

iii) This raises the question at which point in the derivation REC is inserted, and how precisely is the insertion of REC conditioned by **um** and **o outro**? As a Determiner, why doesn't it affect stranding of **um**?

iv) The requirement that REC puts on its second argument requiring it to have the type of **o outro** looks quite similar to a selection requirement. Selection requirements are generally taken to be local. In (46) it is, but not in (4=30). How can such a requirement across a syntactic island be motivated?

* In fact, one would expect that the presence of **um** and the presence of **o outro** together would present sufficient information for the computational system to arrive at a reciprocal interpretation.

v) As Kobayashi notes at another occasion Brazilian Portuguese has a different reciprocal construction, where **um** is in an argument position, but need not command **o outro**.

(7) 

It would be interesting to flesh out in detail the differences in the status of **um** and **o outro** in (7) as compared to (4). Does it involve ambiguities? If so, which?

**3. A very tentative follow-up**

It seems that the main question concerning (4) can be formulated as in (8):

(8) How do we reconcile the fact that in (4=30) **um …. o outro** behaves as a complex polyadic quantifier with the fact that the relation between these elements is not sensitive to syntactic island conditions?

🡪 Do we have operations that may combine two different syntactic objects into one semantic object, and/or induce the scopal effect *Dist >> Diff>> Q* observed?

🡪 (9=43/44) do involve variable binding as a dependency. It is part of the grammar, but insensitive to islands

(9)



🡪 Can we avoid stipulating an underived null polyadic quantifier Recip, but rather derive the interpretation obtained from independent components of the structure?

**Tentative suggestion 1**: Assume that in the schema of (2), **um** [or rather **[ØNP um]]** A-binds **o** in **o outro**, and that the Differentiation function is situated in **o outro**. Could binding allow Diff to combine with the Distributivity function in **um**, and scope over Q, without the insertion of an independent operator REC?

🡪 To put it differently, can a variable binding dependency contribute to emulating the effect of a polyadic quantifier shown in (4=30) by other means?

**A suggestive pattern in Dutch.**

Staying close to Kobayashi's example, in Dutch its direct counterpart with *de anderen* ' the others' behaves scopally as expected. The judgment is quite clear: (10) only has the interpretation of 2 photo's per boy.

(10) De jongens kochten elk 2 foto's die de anderen genomen hadden.

 The boys bought each 2 photo's that the others took.

But: What happens if we build in some further explicit dependencies, combining distribution, and differentiation with a binding dependency?

Consider (11):

 (11) a. *De tennissers* kochten elk 2 foto's die *hun* tegenstanders genomen hadden.

 The tennis players each bought 2 photo's that their opponents took.

 b. *De tennissers* kochten elk 2 foto's die ieder van *hun* tegenstanders genomen had.

 The tennis players each bought 2 photo's that each of their opponents took.

 c. *De tennissers* kochten elk 2 foto's die *hun* tegenstanders ieder genomen hadden

 The tennis players each bought 2 photo's that their opponents each took

**Relevant properties**:

 - High distributivity: *elk*

 - Binding dependency: *tennissers-hun*

 - Lexically represented differentiation: *tegenstanders* 'opponents' within the set of tennis players

 - Low distributivity: *ieder*

**Result**: In (11b,c) what is bought by the tennis players are pairs of two photo's.

* This appears to emulate the polyadic quantifier interpretation just as in the case of **um – o outro.**

**Suggestion: o outro** is neither just a variable, nor a variable over pairs of non-identical individuals, but it combines both a component expressing differentiation and a component expressing distribution.

**Summarizing**: **um** binding **o** and a richer semantics of **o outro** may emulate the polyadic quantifier interpretation, capturing the results presented but simplifying the analysis and retaining a more transparent relation between morpho-syntax and semantic interpretation.

**Suggestion** for testing the relevance of a variable binding based dependency:

* When **um** does not c-command **o outro**, as in (7) one would expect the polyadic quantifier reading to be absent. Is this correct?