

## On non-obligatory control and the grammar of gerunds

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A reasonable desire to reduce the complexity of null arguments brings Hornstein (1999, 2000), among others, to assume that non-obligatory controlled PRO is, in fact, *pro*, a move which in Hornstein's approach enables us to entirely eliminate PRO from the theory. If this idea is on the right track, instances of non-obligatory control could be reduced to a discourse-based identification of *pro* (as for instance along the lines of Frascarelli 2007). This talk intends to discuss a set of data that challenges this endeavor.

As is well known, null subjects of gerundival adverbial clauses such as (1)-(2) are not subject to obligatory control (e.g. Salvi 1986 for Italian). For instance, they do not need to refer to a c-commanding antecedent (1a-c), and they do not need any explicit antecedent in the matrix (2a-c):

- (1) a. Eng. *While running in the park*, a strange thing happened to me.  
b. Fr. *Courant dans le parc*, une chose étrange m'est arrivée.  
c. It. *Correndo nel parco*, una cosa strana mi è successa.
- (2) a. Eng. *Coming out into the open*, it was clear that the temperature had gone up.  
b. Fr. *Sortant à l'air libre*, il était évident que la température avait augmenté.  
c. It. *Uscendo all'aperto*, era chiaro che la temperatura era salita.

Given Hornstein's treatment, the null subjects in (1)-(2) are expected to be pronominal in nature and, hence, instances of *pro*. Such a move may be warranted in principle, for reasons of theoretical simplicity, but nevertheless faces a problem in the following data:

- (3) a. Eng. The crops were destroyed by drought, *leaving the population in despair*.  
b. Fr. La récolte a été détruite par la sécheresse, *laissant la population dans le désespoir*.  
c. It. Il raccolto è stato distrutto dalla siccità, *lasciando la popolazione nella disperazione*.
- (4) a. Eng. In the industrial sector, there were 10.000 jobs lost in June, *bringing the total loss for the year to almost 50.000*.  
b. Fr. Dans le secteur industriel, 10.000 postes d'emploi ont été perdus durant le mois de Juin, *portant la perte de cette année à presque 50.000*.  
c. It. Nel settore industriale sono stati persi 10.000 posti di lavoro nel mese di giugno, *portando la perdita di quest'anno a quasi 50.000*.

The gerundival subjects of (3a-c) and (4a-c) do not refer to single arguments of the matrix clauses but rather to the propositional content of these clauses. In example (3), it is the fact that the crops were destroyed by drought that leaves the population in despair. Likewise, in (4), the fact that 10.000 jobs were lost in June brings the total loss for the year to 50.000 (in Italian, the phenomenon was noticed by Lonzi 1991: 591). It should be noted that the constructions in (3)-(4) are attested in null subject languages, such as Italian, as well as in non null subject languages, such as French and English.

Iatridou & Embick (1997) convincingly argue that *pro* is subject to a restriction to the effect that it cannot take a clause as its antecedent. Among the languages discussed here, this generalization can be illustrated with Italian examples:

- (5) It. Se Gianni<sub>i</sub> tenesse la sua promessa  
 if John held<sub>[subj.]</sub> the his promise  
*pro*<sub>i</sub> ci lascerebbe convinti del suo buon carattere.  
 – us<sub>[cl.]</sub> would-leave convinced of-the his good character  
 ‘If John kept his promise, he/\*it would convince us of his good character’
- (6) It. Se Gianni tenesse la sua promessa  
 if John held<sub>[subj.]</sub> the his promise  
 ciò ci lascerebbe convinti del suo buon carattere.  
 that us<sub>[cl.]</sub> would-leave convinced of-the his good character  
 ‘If John kept his promise, that would convince us of his good character’

In (5), *pro* is co-referent with the subject of the preceding subordinate, *John*. In (6), the demonstrative *ciò* ‘that’ refers to the propositional content of the preceding subordinate: *the fact that John keeps his promise*. Such an interpretation is barred in (5) where *pro* can only refer to the subject of the preceding clause, not to the propositional content of that clause. Given that *pro* rejects a clausal antecedent, the null subjects of (3)-(4) will have to be analyzed as PRO. This suggests that we should recognize the theoretical status of PRO interpreted under non obligatory control.

The remaining part of this talk is dedicated to the analysis of (3)-(4). It is true that such constructions can be paraphrased as relative clauses (*10.000 jobs were lost in June, which brought the total loss for the year to 50.000*). However, it is doubtful whether (3)-(4) can adequately be analyzed as relative clauses. Consider that it is not generally the case that gerundival clauses can express a relative link to the propositional content of the preceding matrix:

- (7) John left which is unfortunate.  
 (8) #John left being unfortunate.

To the extent (8) is at all acceptable, the gerundival subject refers to the matrix subject *John*. Rather, the analysis of (3)-(4) should incorporate the intuition that there is a semantic relationship of consequentiality between the two propositions: the subordinate proposition is in some sense a consequence of the matrix one. One could speculate, for instance, that (3)-(4) instantiate an abstract predication selecting the two propositions as arguments. Some consequences of such a conjecture will be discussed.

## References

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