

## LABELS, INTERVENTION AND ROOT PHENOMENA

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What is the role of a label in syntax (if any)? There are at least two ways in which a label might be defined. According to an internal definition, a label is the feature(s) of a category that determine(s) its distribution (say by determining what it selects or probes and what can select or probe it). According to the external definition (cf. Chomsky 2013), a label is whatever makes the object interpretable at the interfaces (plausibly at the semantic one). The evidence supporting the external definition is not overwhelming, since the same syntactic category can correspond to various semantic types (a DP can be an individual, a generalized quantifier or a property) and a label can be simply ignored at the semantic interface (say, the PP “of John” is interpreted in “their painting of John” much like the DP “John” is interpreted in “they painted John”). So, at best, a label imposes some loose constraints on how a category gets interpreted. We will claim that evidence for the internal definition is more substantial, since without a label it is difficult to build a theory explaining how a syntactic object merges with other categories. In particular, it is difficult to explain how selection works in driving merge if labels only play a role at the interface.

One area in which the external and the internal definitions sharply differ concerns what can remain label-less. Assuming the external definition, at least if interfaces are accessed cyclically, an object can remain temporarily without a label as long as the label-less layer is destroyed before the next point of access to the interface (phase) is reached. Chomsky (2013) massively deploys this mechanism to explain a certain number of facts, including successive cyclic movement, ECM and label determination at the vP level. Assuming the external definition, there is at least one node that can never remain label-less and this the root, the point when the syntactic object is conveyed to the semantic component for good.

Interestingly, the situation is quite the opposite assuming the internal definition of a label. Take for concreteness Cecchetto and Donati’s (in press) theory of labeling summarized in (1) and (2).

- (1) **Labels.** When two objects  $\alpha$  and  $\beta$  are merged, a subset of the features of either  $\alpha$  or  $\beta$  becomes the label of the syntactic object  $\{\alpha, \beta\}$ . A label: (i) can trigger further computation and (ii) is visible from outside the syntactic object  $\{\alpha, \beta\}$  for selection
- (2) **The Probing Algorithm.** The label of a syntactic object  $\{\alpha, \beta\}$  is the feature(s) which act(s) as a Probe of the merging operation creating  $\{\alpha, \beta\}$ .

Nothing in Cecchetto and Donati’s system prohibits unprobed Merge. There is a very severe limitation, though: since the label is provided by the Probe (by 2), unprobed Merge yields an unlabeled object. Given (1), the obvious candidate for a label-less objects is root clauses: labels are needed for a derivation to proceed (they trigger further computation) and feed external Merge (through selection). When a structure is neither embedded nor further computation takes place (the root), it does not need a label. On the other hand, any node other than the root is predicted to be problematic if it lacks a label.

Our talk will compare the internal and the external definitions by adopting the perspective of what objects can remain label-less. We will do so by building on the literature that discusses instances of movement restricted to root clauses (cf. Albrecht, Haegeman and Nye 2012 for a recent overview) as well as on empirical phenomena like subject intervention effects in wh-questions in Romance (which surface in direct questions as opposed to embedded questions, see 3-4).

(3) ?\* Chi Gianni ha investito?  
who Gianni has hit

(4) Mi chiedo chi Gianni abbia investito  
I wonder who Gianni has(SUBJ) hit

As we will explain in our talk, the intervention effect in (3) can be traced back to the fact that root clauses can remain label-less and thus can host instances of unprobed movement. By doing so, we will provide indirect evidence for the internal definition of labels. We will finally extend our approach to subject intervention effects in free relatives in languages like Italian (cf. 5) and French and explain why they do not arise in free relatives in English (cf. 6).

(5) ?\* Chi Gianni ha investito è all’ospedale  
who Gianni has hit is at the hospital

(6) What John bought is valuable