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IDENTITY PROBLEMS. WHEN TWO ARE THE SAME BUT THEY SHOULDN'T.

A. Principle C of Binding Theory is typically stated (Chomsky 1981 and much following work) as a condition that blocks identity between a referential expression and a pronoun c-commanding it (cf. 1). Still, a classical definition like this suffers from some conceptual as well as empirical drawbacks. On the conceptual side, Principle C is a stipulation, while it is desirable to derive it from some deeper principle. On the empirical side, the classical definition of Principle C makes strikingly wrong predictions in at least three areas: identity sentences (2), clitic doubling configurations (3 - River Plata Spanish) and expletive-associate constructions (4 - French). In (2) to (4) a pronoun does c-command a referential expression but identity is *not* blocked.

(1)   *He_i saw $John_i$

(2)   √ He_i is $John_i$

(3) √ Lo_i vimos a $Juan_i$ ("(We) him see to Juan")

(4) √ Il_i est arrivé [un garcon]$_i$ ("Expl is arrived a boy")

Our alternative approach to Principle C *derives* (as opposed to stipulate) this condition and can account for the absence of Principle C effects in (2)-(4).

B. Our starting point are a standard notion of label like (5) and the algorithm in (6), which determines what category gives its label ("projects") when merge takes place.

(5)   Label: features of a syntactic object which can trigger (i.e. probe) further computation.

(6)   *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 $\{\alpha, \beta\}$

We illustrate how (5) and (6) interact with a simple example and use X-bar notation for simplicity: when C is merged with TP, (a feature of) C becomes the label of {C, TP}, because C is the probe of the merging operation (C selects T and not vicevera). Since C becomes the label, it can trigger further computation at the next step (for example, if interrogative, C probes a wh-phrase).

The Probing Algorithm can capture the core cases traditionally described by X-bar theory if, following Chomsky (2008), we assume that every lexical item (LI) is endowed with a feature, call it edge feature (EF), which forces the LI to merge with other material. If we assume this, any time an LI is merged, it qualifies as a Probe by virtue of its EF. This means that an LI, being a Probe by definition, always activates the algorithm in (6) and its categorial feature can provide the label. For example, each time an LI is externally merged with its complement, the LI (the head) is bound to project. Similarly, also when an LI is *internally* merged, it can project. As a result, movement of a LI can 'relabel' its target (see Cecchetto and Donati 2010 for a more comprehensive presentation of the labeling theory based on the Probing Algorithm in 6).

C. Let us start from the canonical Principle C violation in (1). The gist of our approach will be that two categories cannot get the same semantic value by chance (this is blocked by Rule-I or any other device that blocks accidental coreference). On the contrary, any two categories can get the same semantic value only (i) by virtue of semantic binding or (ii) by virtue of entering in a Probe-Goal relation, in which the Goal (a proper name) referentially values the Probe (a pronominal expression). Identification in semantic value between a proper name and a pronoun due to probing (that we call "referential valuation") is just the extension to the case at hand of the mechanism by which (for example) verbal morphology in T probes the subject in Spec,v to value its phi features.

Since *John* cannot bind *he* in (1) due to lack of c-command, the identity reading might emerge only if *he* could probe *John* for referential valuation. However, only labels can be a probe (cf. the definition in 5). It follows that *he* could probe *John* in (1) only if it provides the label when it is merged with the node T". In principle, it can do so given (6), since it is a LI. The configuration leading to the relevant (illicit) reading is (1'):

(1')   [$_{DP}$ [$_{DP}$ he] [$_{T'}$ [$_{vP}$ [$_{DP}$ he] [$_{vP}$ saw John]]]]

In (1') there is an obvious problem, though: the sentence receives a wrong label (a DP label) and, as a result, the derivation crashes at the interface. Canonical principle C cases like (1) are thus reduced to cases of mislabeling.

D. Consider now the contrast between (1) and (2). If we consider the surface subject position, the mislabeling problem that arises in (1) arises in (2) as well. However, a difference emerges when one considers the position in which the subject is first merged (Spec,*v* in 1 and the small clause internal position in 2). In (2), at the small clause level, either *he* or *John* can provide the label, since they bear the same D category and the small clause ends up being labeled D no matter what category projects (the sentence is correctly interpreted as "DP is DP"). So, *he*, in its base position, can project and probe *John*, with no mislabeling being triggered. To the best of our knowledge, this is the only *complete* non-stipulative account for the contrast between (1) and (2) (Heim 1998 and Schlenker 2006 propose an explanation for the acceptability of the informative reading of 2, namely a=b, but the explanation does not extend to the a=a reading, which is grammatical although uninformative).

E. The account for the lack of Principle C effects in (2) straightforwardly extends to the lack of Principle C effect in (3). Assuming a popular analysis of doubling cases (Torrego 1995, Uriagereka 1995, Cecchetto 2000, Belletti 1999, Boeckx 2003 among others) the clitic and the double are originated in the same phrase (a "Big,DP") and the former moves to its final landing site stranding the latter in the base position. If in the original configuration the clitic c-commands the double, the double can referentially value the clitic in the base position. The clitic correctly transmits its label to the Big,DP. This makes the cases in (2) to (3) very much alike. In both configurations, since referential valuation takes place at an early stage, no mislabelling arises when the pronoun moves to its final landing site.

F. The lack of Principle C in (4) is also expected. We assume that an expletive pronoun must enter in a Probe-Goal relation with the associate DP in order for them to be co-valued. Although the expletive must "project" to probe the associate, no mislabelling arises in (4) because expletives do not have a *categorial* feature to transmit (this is shown by the fact that the associate of the expletive can be either a DP or CP in French and many other languages).

G. Since Principle C effects are reduced to cases of mislabeling, we predict that in any context in which the pronoun can "project" triggering no harm, Principle C effects should be obviated. (2) to (4) illustrate this Principle C obviating configuration. One more test is Principle C configurations inside a free relative, cf. (7) in Italian:

(7) √ [$_{DP}$ Chi$_i$ ha votato per John$_i$] è uscito dalla stanza (*lit.* Who has voted for John has gone out from the room)

(7) is not a Principle C violation, since *who* does not need to be referentially disjoint from *John* (this is shown by the fact that, in a situation in which John is the only one who voted for himself, John must have left the room in order for 6 to be true). The lack of Principle C effect is expected if free relatives are analyzed as cases in which a *wh* determiner can transmit its label (cf. Donati and Cecchetto 2010 and Donati 2006).

I. Typically, in Principle C configurations the resulting output (the one where the LI projects) produces an illicit object. This way, Principle C effects are reduced to cases of mislabeling, with no need to postulate a specific condition to rule them out. Cases of Principle C obviation are configurations in which the pronoun can project without producing any harm.

References
Belletti, A. 1999. Italian/Romance Clitics: Structure and Derivation. In *Clitics in the Languages of Europe*, 543–579, Mouton de Gruyter.
Boeckx, C., 2003. *Islands and Chains: Resumption as Stranding*. John Benjamins.
Cecchetto, C. (2000). Doubling structures and reconstruction. *Probus* 12: 93–126.
Cecchetto, C. & C. Donati 2010. On labeling: Principle C and head movement. *Syntax* 13: 241–278.
Chomsky, N. 1981. *Lectures on Government and Binding*. Foris.
Chomsky, N. 2008. On phases. In *Foundational issues in linguistic theory*. 133–166. MIT Press.
Donati, C. 2006. On *Wh*-head movement. In *Wh-movement: moving on*, 21-46. MIT Press.
Heim, I. 1998. Anaphora and Semantic Interpretation: A Reinterpretation of Reinhart's Approach. In *The Interpretive Tract*, 205-246. MIT Working Papers in Linguistics 25.
Schlenker, P. 2003. Non-Redundancy: Towards a Semantic Reinterpretation of Binding Theory. *Natural Language Semantics* 13: 1-92.
Torrego, E. (1995). On the nature of clitic doubling. In *Evolution and Revolution in Linguistic Theory*, 251–275. Georgetown University Press.
Uriagereka, J. 1995. Aspects of the Syntax of Clitic Placement in Western Romance. *Linguistic Inquiry* 26: 79-123.