Notes on movement of verbal chunks:
smuggling and the vP periphery

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Abstract: In this paper we would like to illustrate some consequences of the derivational option of moving a verbal chunk to a higher position in the clausal spine. This option is at the core of Collins' (2005) influential "smuggling" analysis of passive (extended along different lines in Belletti & Collins 2021), but the constructions requiring such a derivational move are quite diverse: the Romance causative construction (Belletti 2017, 2021), the configuration required by certain psych-verbs, the apparent reordering of certain adverbials (Belletti & Rizzi 2012).

Here we would like to illustrate the smuggling analysis of passive in Romance by looking in particular at some interactions of the smuggling approach with certain properties of anaphoric constructions. This will lead us to address the general incompatibility of the passive voice with anaphoric clitics and to discuss possible approaches.

We will then address the low periphery of Italian along the lines of Belletti (2004) discussing the partial parallelism holding between high and low peripheries. Both structural zones are dedicated to the expression of scope-discourse properties at the peripheries of the two core nodes defining phases, CP and vP, with certain structural and interpretive properties systematically differentiating the two peripheries. One remarkable property of the low periphery is that the low topics and foci, which according to the criterial approach should be specifier positions, appear in the right periphery of the clause in modern Italian (rather than in the middle field, where they would be naturally expected to occur). We argue that this positional characteristic is amenable to a leftward movement of a verbal chunk. A comparison of word order properties in Modern and Ancient Italian, analyzed along the lines of Poletto (2014), will lead us to evaluate the role of movement of verbal chunks in diachrony.

1.   Passive and anaphor binding

The passive construction raises an obvious problem for locality. If the object DP is moved to subject position in a passive sentence, the question arises of how this movement is possible across the external argument EA (pronounced or not), without violating the appropriate version of intervention locality / Relativized Minimality (Rizzi 1990):

(1)   The problem was [EA solved __]

The classical GB account (Chomsky 1981) is that the passive morphology "absorbes" the external theta role (possibly diverting it to an adjunct-like PP, the *by* phrase), so that under the Projection Principle no structural DP position is projected as the EA, and movement of the object is unimpeded in (1).

Collins (2005) made the influential proposal, further developed in much recent literature, see Belletti & Collins (2021) in particular, that the locality problem arising in (1) is resolved in a different way: a verbal chunk (which we call VP, but labels don't really matter for the argument) containing the object DP can be moved within the lower structure of the IP across the external argument, thus making further movement of the object unimpeded:

(2)   … was [$_{VP}$ solved DP] [$_{vP}$ EA __]

More specifically, Collins (2005) argues that the passive voice can be realized as the preposition *by*, which assigns case to the EA and attracts the verbal chunk to its Spec, much as in Kayne's (2004) analysis of prepositions as probes (alternatively, the VP may be moved to a higher Spec position in the functional spine, as indicated by (3)):

(3)   The problem was [$_{VP}$ solved DP] [$_{voiceP}$ by [$_{vP}$ Bill __]]

This analysis differs from the traditional GB analysis in that the EA is not demoted to an adjunct-like PP (a chômeur, in the traditional terminology of Relational Grammar, Perlmutter and Postal 1984), but remains in its argumental position in the specifier of the vP, from where it c-commands (directly or through reconstruction) the rest of the vP.

The c-commanding properties of the EA are shown, for instance, by the fact that the EA can bind an anaphor, e.g., in a dative/benefactive position, an effect that we illustrate in Italian: the passive counterpart of (4)a, (4)b, is equally acceptable.

(4)   a. Il presidente ha riservato questi privilegi a/per se stesso
             'The president kept these privileges for himself'

         b. Questi privilegi sono stati riservati dal presidente a/per se stesso

'These privileges have been kept by the president for himself'

This is expected if the structure is as in (3). The external argument c-commands the anaphor (left behind, in this case, by the movement of the verbal chunk, which can then be smaller than the whole VP including all the complements):

(5)   Questi privilegi sono stati [$_{VP}$ riservati DP] [$_{voiceP}$ da [$_{vP}$ il presidente ___ a/per se stesso]]

On the other hand, this clear binding option would not be expected if the external argument was embedded within an (adjunct-like) PP, from where it could not c-command the anaphor. In fact, while a dative DP can marginally bind an anaphor in Italian, as in (6)a (suggesting that the dative preposition *a* is akin to a case-marker, and *a Gianni* is a KP here), other prepositions disallow this option:

(6)   a. ? Ho parlato a Gianni di se stesso
            'I spoke to Gianni of himself'

        b. * Ho parlato di Gianni a se stesso
            'I spoke of Gianni to himself'

        c. * Ho lavorato con Gianni per se stesso
            'I worked with Gianni for himself'

        d. * Ho lavorato per Gianni con se stesso
            'I worked for Gianni with himself'

        e. * Ho lavorato da Gianni per/con se stesso
            'I worked at Gianni's for/with himself

Particularly noticeable is the last case in which the complement of preposition *da*, homophonous to the preposition translating English *by* in passive and meaning "at X's place", cannot bind an anaphor, in sharp contrast with the *by* phrase in (4)b.

So, were the *by* phrase an ordinary PP, the binding capacities of the nominal element outside the PP would be unexpected. The full acceptability of (4)b, in contrast with (6), thus argues for representations like (3)-(5), supporting the smuggling analysis of passive.

2. Passive voice and its incompatibility with clitic anaphors

Going back to (4), if the dative/benefactive anaphor is cliticized, a sharp contrast arises between active and passive, the passive counterpart being strongly ungrammatical:

(7)   a. Il presidente si è riservato questi privilegi
            'The president kept these privileges for himself'

         b. * Questi privilegi si sono stati riservati dal presidente
            'These privileges have been kept by the president for himself'

Passive is generally incompatible with clitic reflexivization, e.g., the subject of a passive sentence can bind the strong reflexive *se stesso*, as in (8)a, but if the reflexive is cliticized the structure becomes ungrammatical, as in (8b):

(8)   a. Gianni è stato affidato a se stesso
            'Gianni was entrusted to himself'
         b. * Gianni si è stato affidato
            'Gianni to-himself was entrusted

Rizzi (1986) treated core cases of incompatibility of passive and reflexivization like (8b) in a representational approach to chains as a kind of intervention effect: the derived subject cannot reach the object trace in chain formation because of the intervention of the coindexed reflexive clitic. When in (9) *Gianni* looks for its theta role in object position, chain formation cannot jump across the nominal and coindexed *si*, but if the latter is incorporated into the same chain, a theta criterion violation results:

(9)   * Gianni$_i$ si$_i$ è stato affidato   __$_i$ __$_i$
            'Gianni to-himself was entrusted'

Nevertheless, the impossibility of (7b), repeated below for clarity, shows that the incompatibility between passive and anaphoric cliticization is more general:

(7)   b. * Questi privilegi si sono stati riservati dal presidente
            'These privileges have been kept by the president for himself'

In this case the object promoted to subject position is not coindexed with the reflexive clitic, hence the kind of intervention illustrated by (9) does not arise.

Nor could one attribute the strong deviance of (7b) to the fact that in the surface arrangement the reflexive clitic would be higher than its antecedent *Il presidente*, hence not c-commanded by it. On the one hand, as Collins (2005) shows, reflexive binding can be satisfied under "reconstruction", as the following, with the dative/benefactive scrambled out of the domain of the by phrase, is acceptable:

(10)   Questi privilegi sono stati riservati a/per se stesso dal presidente
        'These privileges have been kept for himself by the president'

On the other hand, a reflexive clitic can be bound by a following (and arguably lower) antecedent under reconstruction; e.g., a variant of (7a) with a postverbal focal subject (and with the object dislocated) is fully acceptable:

(11)   (Questi privilegi,) se li è riservati il presidente
        'These privileges, to himself them kept the president'

Similarly, in an Aux to COMP gerundive construction, the reflexive clitic carried by the auxiliary to the C system can have its binding requirement satisfied by the lower subject under reconstruction:

(12)   Essendosi il presidente riservato questi privilegi,…
        'Being to-himself the president kept these privileges,…

Leaving aside for the moment the case of (11), the structure in (12) is derived from an intermediate representation like (12') by movement of the gerundive auxiliary to C, carrying along the reflexive clitic (Rizzi 1982):

(12') Il presidente essendosi riservato questi privilegi,…

'The president being-to-himself kept these privileges,…

Anaphor binding (and in particular the binding of an anaphoric clitic, as in (12)) can be satisfied under reconstruction. If so, why couldn't the reconstruction option salvage a structure like (7b)?

In conclusion, there seems to be a general incompatibility between passive and reflexive cliticization. Why should it hold? One line of analysis of Romance reflexive cliticization, initiated by Kayne, treats the reflexive clitic as a kind of unaccusative marker (see also Burzio 1986), a view supported by the *have* → *be* auxiliary change in reflexive constructions in many Romance varieties. If this analysis is extended to make reflexive cliticization akin to the passive voice, i.e., a manifestation of a reflexive voice, the conclusion could be derived that the two devices compete for the same voice position, hence are incompatible (this is in fact a way of expressing this particular case of the 1 Advancement Exclusiveness Law of Relational Grammar).

This view, recently revamped in the study of the acquisition of passive (Belletti 2020) thus seems to be able to derive the incompatibility of reflexive cliticization and passive in full generality, capturing both (7b) and (8b).

It should be noticed that, if we also want to capture the well-formedness of (11) and (12) through reconstruction, there must be a level of the derivation in which the subject c-commands *si* in the derivation of these sentences. This is straightforward for (12): whatever the previous derivational steps, the subject DP in its canonical subject position c-commands *si* before Aux to COMP applies (representation (12')), and the binding requirement is satisfied in this configuration. The well-formedness of (11), repeated below for clarity, requires additional assumptions:

(11) (Questi privilegi,) se li è riservati il presidente

'These privileges, to himself them kept the president'

Here the postverbal subject occupies the low focus position, a position lower than the final position occupied by the reflexive clitic in the IP spine. If in general *si* starts in the external argument position (as in Kayne's original proposal, assumed in Belletti 2020) the question arises of where the agent is inserted in cases like (11), in which *si* is a kind of benefactive

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argument. Suppose that benefactive *si* starts in a position higher than the agent: then *il presidente*, starting from a lower position then *si*, as in (11'), cannot satisfy the binding requirement on this level.

(11')   … [Foc [si   [il presidente [riserv- …

But then *il presidente* moves to Spec of Foc, as in (11'')

(11'')   [il presidente Foc [si [<il presidente> [riserv-…

From this derived position, *il presidente* c-commands, hence can bind, *si*; *si* is then moved to the voice position to check appropriate voice features (the incompatibility with passive is sanctioned at this level), and then to its final destination as a clitic. This analysis requires that the low focus position is a possible binder of anaphors, i.e., a position with A-like properties according to the original A/A' divide (as proposed in Belletti 2004, also in connection with the fact that the position has a role in agreement, a typical property of A-positions).

Another possibility is that *si* starts in a position internal to vP (as in traditional analyses, and Sportiche 2005), it is bound within the vP by the external argument, and then moves to voice (where the incompatibility with passive voice arises), and then to its final destination as a clitic. Under both analyses the grammaticality of (11) is captured, the crucial step being the satisfaction of the binding requirement of *si* under reconstruction.

3.   High and low peripheries

Under a cartographic analysis of the complementizer system (Rizzi 1997 and much subsequent work), the left periphery of the clause involves a complex hierarchical structure hosting positions dedicated to express properties of scope-discourse semantics: the scope of operators, and articulations such as topic – comment, and focus – presupposition.

Belletti (2004) argues that the lower part of the clausal structure, the vP, is endowed with a periphery, the low periphery, partially mirroring the properties of the "high" (or left) periphery. In particular, the low periphery includes a low focus position, a new information focus that we have already discussed in connection with (11), a position highlighted, e.g., by the VS order in answers to wh-questions on the subject, but in fact generally accessible to focalized arguments and adjuncts:

(13)   Q: Chi ti ha scritto?
          'Who wrote to you?'

        A: Mi ha scritto Gianni
          'To me wrote Gianni = Gianni wrote to me'

It also includes a low topic position, corresponding to the construction referred to as "Clitic right-dislocation":

(14)   Gianni lo ha scritto, l'articolo
        'Gianni it-wrote, the article'

One salient property which characterizes the low periphery in Modern Italian (and Modern Romance in general) is the fact that the low focus and topic are right-peripheral: they appear at the very end of the clausal structure and are excluded in the middlefield:

(15)   *Mi ha Gianni scritto
         'To me has Gianni written'

(16)   *Gianni lo ha, l'articolo, scritto
         'Gianni it has, the article, written

If the criterial view (Rizzi 1997) is extended and adapted to the low periphery, these constructions involve a Spec-head configuration with a Foc or Top head. If specifiers generally precede heads, as expected under Kayne's (1994) antisymmetry, one would expect the order in (15) and (16) to surface.

        The natural way to derive the correct order in (15)-(16) is to assume a leftward movement of a verbal constituent, either just the verb (as in the cases analyzed by Belletti 2004), or a larger verbal chunk, which would make this derivational move akin to the smuggling operation in passive, psych-verbs, and the other cases discussed in Belletti & Rizzi (2012).

        This analysis has clear diachronic implications if combined with important observations made by Cecilia Poletto on Old Italian. Poletto (2006, 2014) observes that in Old Italian the

order OV (and more generally complement - V) is typically found also in cases in which the OV sequence follows an auxiliary, as in

(17)   a. *dice che poi àe **molto de ben** fatto in guerra et in pace*.
         says that then has a lot of good done in war and in peace

(BL, *Rett.*, p. 26, r. 22)

        b. *il quale da che ebbe **tutto Egitto** vinto…*
         who since had.3sg all Egypt won…

(BG, *Or.*, p. 83, r. 15)

Poletto argues that this order cannot reflect a basic OV order (in the sense in which Japanese, Turkish, etc. have basic OV order, i.e. as resulting from a basic ordering parameter, or application of "semantically meaningless" movement, in the sense of Cinque 2022, reinterpreting Kayne 1994) because we typically find an alternation with VO

(18)   *fece menare **il destriere al campo***
         let.3sg lead the horse to-the camp

(*Novellino,* p.126, r. 13)

Nor can the OV order be directly amenable to the V2 properties of Old Italian, as the order is found also in configurations like (17), in which OV is lower than an auxiliary, hence IP-internal.

The solution that Poletto proposes is that Old Italian is VO, much as Modern Italian, but can involve movement of the object (and of other complements) to Belletti's (2004) low periphery, immediately on top of the vP node. Specifically, Poletto assumes that the low peripheral focus position is activated in cases like (17), with movement of the direct object to it. She also argues that the V-attracting property of the Foc head is common to the high and low peripheral foci, thus drawing a parallel between V2 effects (high periphery) and OV order (low periphery). Similar cases of V2-like phenomena observed both in high and low configurations of the clausal structure have also been found outside of the Indoeuropean family: see for instance van Urk (2015) on the Nilotic language Dinka Bor, and the discussion in Samo (2019). According to this analysis, the loss of the V-attracting property of Foc was linked to the loss of V2 and contributed to the loss of the OV order illustrated by (17).

Still, an important diachronic issue remains. If both Old and Modern Italian involve a low periphery, why is it that the order in (17) is systematically excluded in Modern Italian? i.e., the modern version of (17) is (18):

(18)　　a. Dice che poi ha fatto **molto bene** in guerra e in pace

　　　　　'(he) says that then (he) has done a lot of good in war and in peace'

　　　　b. Il quale, da che ebbe sconfitto **tutto l'Egitto**…

　　　　　'…who, since (he) has defeated all Egypt…'

And the order VO is independent from discourse-related properties. It is found both as the neutral order (as in (19a)), and as the order with focalized and topicalized (right-dislocated) objects (and other arguments or adverbials), as in (19b-c):

(19)　　a. Ho letto il tuo libro　　(answer to Che cosa hai fatto?)

　　　　　'I read your book　　(answer to What did you do?)

　　　　b. Ho letto IL TUO LIBRO (non quello di Gianni)

　　　　　'I read YOUR BOOK (not Gianni's book)

　　　　c. Lo ho letto, il tuo libro

　　　　　'I it-read, your book'

Clearly, a parametrization and a diachronic change must be postulated here.

The natural proposal is that the leftward-movement of a verbal constituent, optional in Old Italian, has become obligatory in Modern Italian. Consider for instance the derivation of (17b) in Old Italian (assuming the direct object to be focused here):

(20)　　a　ebbe　[　Foc　[　vinto　tutto Egitto ….　　→ Mov of Obj to Spec-Foc
　　　　b　ebbe　[tutto Egitto　Foc　[　vinto __ …

In Modern Italian the same derivational steps are involved, but movement of the object to the low focus position is followed by leftward movement of the verbal constituent, which reconstitutes the VO order:

(21) a. ebbe [Foc [sconfitto tutto l'Egitto → Mov of Obj to Spec-Foc

   b. ebbe [tutto l'Egitto Foc [sconfitto __ → Mov of verbal chunk

   c. ebbe [sconfitto __] [tutto l'Egitto]

Poletto assumes that the verbal chunk can moves to the left also in Old Italian (this is essential, Poletto argues, to fully capture Egerland's (1996) generalization concerning past participle agreement). If this movement step does not take place, the focalized (or topicalized) constituent will surface in the middle field, as in (20)b. If in Modern Italian the movement of the verbal constituent has become obligatory, the low focus position and the entire low periphery of Belletti (2004) will systematically surface in clause-final position, as in (21)c.

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