Extractability in Agreeing/Non-Agreeing Modifier Constructions

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This paper argues that the agreement requirement on left branch extraction of adjectives (Bošković 2005, 2009, 2013) and the agreement requirement on adjective stranding (Bošković 2009, c.f. Hale 1981) can be unified and deduced from the Labeling Algorithm (Chomsky 2013) (LA).

While Bošković (2005, 2009, 2013) argues that LBE of adjectives is possible only in languages without articles, he also notes an additional requirement: such LBE requires A/N agreement. Thus, it is possible in Russian and Serbo Croatian (SC), article-less languages with A/N agreement, but not in Japanese, Korean and Chinese, article-less languages without A/N agreement. Furthermore, even in SC only agreeing adjectives can undergo LBE. Both *braon* and *smedja* mean 'brown' but only the latter agrees with the noun, and only the latter can extract (*braon* is a frozen form).

(1) a. ***Braon**$_1$ je on kupio [t$_1$ kuću].
     brown   is he bought   house
     'He bought a brown house.'
  b. **Smedja**$_i$ je on kupio [t$_1$ kuću].
     brown.acc.fem.sg is he bought   car.acc.fem.sg

There is a similar requirement on adjective-stranding extraction. Consider for example Warlpiri (2). Only in the discontinuous 'the small two children' in (2a) the number and the Case ending must be present on both parts of the split NP; i.e. only in this case A/N agreement in this respect is enforced (see Bošković 2009 for similar cases of this type from other languages).

(2) a. kurdu- jarra rlu ka- pala maliki wajilipi-nyi   wita- jarra- rlu.
     child   dual erg pres dual dog   chase-nonpast   small dual erg
     'The two small children are chasing a dog.'
  b. maliki ka- pala wajilipi-nyi   kurdu wita- jarra- rlu.
     dog   pres dual chase-nonpast   child   small dual erg   (Hale 1981)

I unify the two phenomena in question as follows:

(3) The adjective and the noun can be split under extraction if and only if they agree.

I also show that the generalization in (3) can be deduced from LA. In Chomsky (2013), when two maximal projections merge, there are two ways of determining labeling: *i:* One of them moves away (since traces are ignored for labeling) (LA *i*) or *ii*: The phrases in question undergo feature sharing, i.e. agreement (LA *ii*). Now, Hornstein and Nunes (2008), Hunter (2010) and Bošković (in press) among others, argue that the adjunct configuration does not need labeling for interpretation, as in (4) (represented as ?, following Bošković in press; we would have here <AP, NP> under Chomsky's 2013 pair-merge view of adjunct configuration; this would also work for the proposed analysis, since what is important for us is that neither AP nor NP projects here by itself, as discussed directly below). I make a somewhat similar but stronger proposal: For adjunct interpretation, it is not possible for one element to project (this fits well semantically with the rule of restrictive modification, where both elements essentially contribute equally semantically to the newly created element). (4) is then the representation of the case with non-agreeing adjectives; what is important is that it is not the case that one of the elements in question projects. (5), on the other hand, is the representation of an agreeing adjective case: here labeling is established through agreement. However, as in (4), it is not the case that one of the relevant elements projects by itself.

(4)   ?   (for non-agreeing adjectives)   (5)   φ   (agreeing adjectives)

    AP   NP   AP$_φ$ NP

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While both (4) and (5) conform to the condition on adjunct labeling proposed above, their syntactic behavior is predicted to be different. (4) does not allow any extraction of AP or NP: if one element moves, since traces are ignored for the purpose of labeling the remaining element will project a label given LA *i*, which is disallowed here, as discussed above. In (5), such movement does not create a new label, hence movement is allowed. (Note that I here assume that labeling can occur as soon as the relevant configuration is created, as crucially argued in Bošković in press, contra Chomsky 2013 (if this were not possible, configurations where for example both the head and its Spec/complement move would be disallowed)).

The above deduces the generalization in (3): non-agreeing modifiers create configurations like (4), where neither element can move; on the other hand, agreeing modifiers participate in the configuration in (5), which allows movement.

The deduction of (3) can also be extended to account for the Baker, Aranovich and Golluscio 2005's generalization that adjectives can be stranded under N-incorporation only if the language has N/A agreement. The stranded adjective in Mayali (6) bears a feminine prefix, agreeing with the incorporated noun *yaw* 'child.' However, in Mapudungun (7), the stranded adjective does not decline and the stranding is prohibited.

(6) Al-wakadj ka-yaw-karrm-e   al-daluk.
    Al-wakadj 3S/3O-child-have-NP   FEM-female.
    'Al-wakadj has a female child.'   (adjective stranding, Mayali; Evans 1997:400)
(7) *Pedro ngilla-waka-y   küme.
    Pedro buy-cow-IND.3sS   good
    Intended: 'Pedro bought good cow(s).'   (Mapudungun; Harmelink 1992:132)

(6) has an agreeing adjective, hence the configuration in (5): N-incorporation is then allowed in the same manner as movement in SC (1b) and Walpiri (2). (7) however contains a non-agreeing adjective: N-incorporation is then prohibited in the same manner as movement in SC (1a) (it would create a labeled object, in particular, labeled as AP, which, as discussed above, is disallowed here).

Under the current analysis, a question arises regarding clausal adjunct movement, since these elements generally do not agree, as in *how did John leave?*. Following Stepanov 2001 (see also Hagstrom 1998 and Bošković in press), I argue that wh-adjuncts are merged differently from non-wh-adjuncts due to the presence of the Q-morpheme, which is implemented as merging them with the Q.

(8)   ?
           /\
      QP   vP
    /\
  how   Q
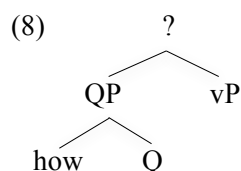
In (8), *how* itself can move as its movement does not affect the label of <QP,vP>.

This analysis is extended to other cases of operator-like movement of adjuncts, like topicalization of adjuncts, which I argue involves Top/TopP in the same manner that wh-movement involves Q/QP. Crucially, I will show that the analysis deduces a puzzling property of scrambling discussed in Miyara (1982), Saito (1985), Bošković and Takahashi (1998), among others: true scrambling of adjuncts is not possible in Japanese. As Saito (1989, 1992) shows, scrambling in Japanese does not involve operator movement; it is in fact semantically vacuous. There is then no head/phrase corresponding to Q/QP from (8) with scrambling. Since in their base-position adjuncts are merged through an unlabelled configuration, they are then not allowed to scramble.

In summary, the paper establishes the generalization that an adjective and a noun can be split under extraction only if they agree, and provides an account of the generalization within the labeling system. The account is also extended to the well-known ban on scrambling of adjuncts in Japanese.