Rescue by PF deletion, intervention effects, and head movement

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Ross (1969) observed that island violations can be rescued by applying ellipsis.

- (1) a. *Ben will be mad if Abby talks to one of the teachers, but she couldn't remember which (of the teachers) Ben will be mad [if she talks to]
 - b. Ben will be mad if Abby talks to one of the teachers, but she couldn't remember which (of the teachers) Ben will be mad [if she talks to] (Merchant 2001)

Recent approaches (Merchant 2001, Lasnik 2001) to the rescuing effect are based on Chomsky (1972): a * is assigned to an island when movement crosses it. If the * remains in the final PF representation, a violation occurs. However, if a PF operation, like ellipsis, deletes a category containing the *-marked element, the derivation is rescued. While further reduction is obviously needed here (see Hornstein et al 2003 for an interesting attempt), in this talk I simply adopt the broad outline of this approach, my goal being to show that the rescue-by-PF-deletion mechanism can be successfully extended to deduce Chomsky's (1995) generalization in (2) as well as the generalization in (3), which reduces (2) and (3) to (1) and resolves a serious problem for the copy theory of movement, once we allow the rescuing effect to arise not only through ellipsis deletion but also through copy deletion. (2) is illustrated by Italian (4), where raising across an experiencer is blocked (4a), but the blocking effect is voided if the experiencer is turned into a trace (4b).

- (2) Traces do not count as interveners for relativized minimality effects.
- (3) A phrase that is normally an island for movement ceases to be an island if headed by a trace
- (4) a. *Gianni_i sembra a Maria [t_i essere stanco] b. A Maria_j, Gianni_i sembra t_j [t_i essere stanco] to Maria seems to Maria to-be ill to Maria Gianni seems to-be ill 'To Maria, Gianni seems to be ill' (Boeckx 2007)
- (3) is illustrated by the Galician data in (5). Wh-movement is not possible from a DP headed by a definite article in Galician (5a), i.e. such DPs are islands/barriers in Galician. Significantly, as demonstrated by Uriagereka (1988,1996), wh-movement from such DPs is possible when the article head of the DP undergoes incorporation into the verb ((5b); the incorporation has morphological effects, see Urigereka 1988). In the talk I will provide a number of additional arguments (from Serbo-Croatian, Spanish, and Chichewa) for the generalization in (3), showing that the island-voiding effect of traces as heads of islands is quite general.
- (5) a. *De quén_j liches os mellores poemas de amigo t_j? of whom read (you) the best poems of friend
 - b. (?)De quén_j liche-los_i [$_{DP}$ [$_{D'}$ t_i [$_{NP}$ mellores poemas de amigo t_j]]] of whom read (you)-the best poems of friend

'Who did you read the best poems of friendship by?' (Uriagereka 1996)

Focusing first on the generalization in (2), I give the following account of the rescuing effect in (4): Pursuing the general approach where a * is assigned to an element that has caused a locality-of-movement violation, the intervener (*a Maria*) in both (4a) and (4b) gets a * when subject movement crosses it (just like the adjunct *if*-clause gets a * in both (1a) and (1b) under this approach).

(6) Gianni_i sembra a Maria* [Gianni_i essere stanco]

However, the *-marked intervener is deleted under copy deletion in (4b), where the intervener moves, but not in (4a) (again on a par with (1), where the adjunct is deleted via ellipsis only in (1b)) (7) A Maria Gianni_i sembra a Maria* [Gianni_i essere stanco]

Since a * is then present in the final PF representation only in (4a), only (4a) is a locality violation. Under this analysis, the contrast in (4) is treated in exactly the same way as the contrast in (1). This is accomplished by using the repair-by-PF-deletion mechanism, which provides a uniform account of the saving effect of ellipsis and movement (i.e. traces) on locality violations. Most importantly, the generalization in (2) is deduced in a way that is fully consistent with the copy theory of movement, resolving a serious problem for this otherwise quite successful approach. Under the copy theory of movement, there is nothing surprising about (2); the relevant cases involve deletion

of a relativized minimality intervener, i.e. deletion of an element that has caused a locality-of-movement violation, just like (1b). Like (2), the generalization in (3) can also be deduced from the rescue-by-PF-deletion mechanism once we allow the rescuing effect to arise not only through ellipsis deletion but also copy deletion. All we need to do to be able to treat (3) as another instance of rescue by PF deletion is to assume that in the case of wh-movement (or any movement) out of islands, the * is placed on the head of the phrase functioning as an island, not the whole island. The * is then placed on t_i in (5b) (not on the DP). But t_i is actually a copy that is deleted in PF. As a result, no * is present in the final PF representation of (5b). The rescue-by-PF deletion mechanism thus accounts for the contrast in (5). More generally, it deduces the generalization in (3), unifying it with (2) and the amelioration effect of island violations under ellipsis. The contrasts in (1), (4) and (5) thus receive a unified treatment under the rescue-by-PF-deletion analysis.

The above account of (3)/(5) makes a rather dramatic prediction: as long as relativized minimality (i.e. the head movement constraint) is obeyed, head movement should not be subject to traditional islandhood/barrierhood. Since when a head of an island moves out of the island, the * is placed on the copy in the head of the island position, which is a copy that is deleted in PF, no * is then present in the final PF representation resulting from such movement.

(8) $X_i [XP [X] = X^i]$ (where XP is a (non-relativized minimality) island)

I show that the prediction is borne out. Thus, head movement out of time and manner adjuncts is possible in Galician, as illustrated by D-incorporation for the former in (9a) (note that the incorporation also makes possible wh-movement from the adjunct in question (9b); such movement is not possible without incorporation, where the article has a different form).

(9) a. chegamo-la semana pasada arrived-the last week 'We arrived last week.'

b. ?de que semana chegastede-lo Luns 'Of which week did you guys arrive the Monday?'

As further illustration, I show that incorporation is possible out of manner adverbials in Kinyarwanda and reason adverbials in Chichewa, as illustrated for the former in (10). Incorporation is also possible out of passive *by*-phrase adjuncts (11) in many languages (see Baker 1988).

(10) a. Umugabo a-ra-**som**-a ibaruwa **n**'-iibyiishiio.

man SP-PRES-read-ASP letter with-joy

b. Umugabo a-ra-**som-an**-a ibaruwa iibyiishiio. man SP-PRES-**read-with**-ASP letter joy

'The man is reading a letter with joy.' (Kimenyi 1980)

(11) a. Khwien-ide Ø-**ēdeure**-ban **kan-ide-ba**. b. Khwien-ide Ø-**kan-ēdeure**-ban. dog-suf A-**kick**/PASS-PAST **horse-suf-instr** dog-SUF A-**horse-kick**/PASS-PAST Both examples: 'The dog was kicked by the horse.'

(Active: *Kan-ide Ø-kwien-ẽdeure-ban* 'The horse kicked the dog.') (Southern Tiwa; Baker 1988) I also discuss a number of arguments from the literature (especially those involving incorporation) that head movement out of (non-relativized minimality) islands is banned (because head movement is subject to traditional islandhood) and show that the arguments involve interfering factors (in most cases, the relevant head movement either violates the head movement constraint (with intervening heads not being turned into copies that are deleted in PF), or independent constraints on incorporation that have nothing to do with the locality of movement).

In the paper I also show that the rescue-by-PF-deletion analysis can be extended to the lack of intervention effects with certain null arguments which are otherwise found with their overt counterparts (in particular, null arguments that arise via argument ellipsis, which deletes *-marked interveners, rescuing potential locality violations) and explore the possibility of extending the rescue-by-PF-deletion account from Movement to Agree (see Otaki 2009), a step which I show makes possible a deduction of Baker's (1988) Government Transparency Corollary (GTC) effects; more precisely, it unifies Baker's GTC effects with the amelioration effects in (1), (4), and (5).