Voiding Island Effects via Head Movement

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Abstract: I argue that Bošković's (2011c) generalization concerning the island

voiding effect of incorporation can be captured naturally within minimalist bare

phrase structure if head movement is a) a syntactic operation, and b) leaves no

trace/copy. The latter, coupled with the bare phrase structure version of

endocentricity, derives the voiding effect without additional provisos. Kiss' (2008)

"domain flattening" phenomena are also expected under the proposed account.

Further empirical consequences are discussed.

Keywords: head movement, incorporation, trace, bare phrase structure

Head movement (HM) has been subject to close scrutiny in the recent syntactic

theory. The reason is that some of its properties appear unusual in the context of the

minimalist conception of grammar and its desiderata. As Chomsky (2001) points out,

in contrast to XP movement, HM 1) does not seem to affect interpretation; 2) has no

clear triggers; 3) is acyclic; 4) leads to a configuration where the moved element does

not c-command its trace; and 5) in long-distance contexts, proceeds in a "snowball"

fashion forming increasingly bigger clusters with each steps, rather than successive

cyclically as XPs would (in fact, successive cyclic HM would require excorporation,

cf. Roberts 1991). All of that creates an impression that does not fit easily into the

mainstream conception of movement (internal Merge) as one that a) affects

interpretation; b) is strictly cyclic; c) is triggered; d) is successive cyclic; and e) observes the c-command requirement on trace.

The observed discrepancy regarding HM has generated a number of proposals aimed at achieving greater coherence between HM and what is considered to be a good minimalist design. These proposals diverge whether HM should be treated as part of narrow syntax, and roughly fall into three different types. The first, originally due to Chomsky (2001), takes the above mentioned properties as a possible indication that HM is not part of the core engine performing syntactic computations, but is subject to requirements at the PF interface. Boeckx and Stjepanović (2001) explore this suggestion in the context of pseudogapping (see also Baltin 2002).[1] Another, more radical, view assumes that HM does not exist at all, and its effects are derivable essentially from a series of remnant XP movements (Kayne 1994, Koopman and Szabolcsi 2000, and others). Finally, the third approach argues that HM must be retained in core syntax and attempts to incorporate its seemingly unusual properties into the minimalist system via re-interpreting assumptions pertaining to XP movement and combining them with certain morphological requirements (Matushansky 2006), exploring the theoretical potential of HM (e.g. Roberts 2010, Donati 2006, Suranyi 2008) and strengthening independent evidence that HM does indeed have syntactic status (Lechner 2006).

I argue that at least some cases of HM must be treated as part of core syntax by virtue of an important syntactic effect that it produces. These are cases of incorporation of D or P heads into a c-commanding lexical category (e.g. V). That incorporation exists, is long known (Baker 1988). The currently accumulating evidence suggests that when the incorporating D itself heads a syntactic island (e.g.

complex DP), incorporation of that D effectively removes that island, so that a dependency such as wh-movement can take place across the vanished boundary. As will be shown below, this seemingly surprising effect is in fact not surprising at all, but naturally follows from considerations of endocentricity in combination with the minimalist bare phrase structure.

1. Islands headed by traces

Bošković (2011c:16) proposes the following generalization (see also Bošković 2005):

(1)   A phrase that is normally a barrier to movement ceases to be a barrier if headed by a trace.

At issue here is an unusual situation where an islandhood of a phrase is voided when that phrase is headed by a trace. Consider some relevant data.

1.1. Voiding DP islands

Uriagereka (1988, 1996) show that argument (2) and adjunct (3) wh-extraction from inside the DP in Galician are possible only if determiner incorporation into the selecting verb has taken place (emphasis mine):

(2)   a. (?)De quén liche-**los**   mellores poemas de amigo?

       of whom read.2SG-the best   poems   of friend

       'Who did you read the best poems of friendship by?'

   b. cf. *De quén liches   **os** mellores poemas de amigo?

       of whom read.2SG the best   poems   of friend

(3)   a. De que zonas liche-**los**   mellores poemas de amigo?

       Of what areas read.2SG-the best   poems   of friend

       'What areas did you read the best poems of friendship from?'

   b. cf. *De que zonas liches   **os** mellores poemas de amigo?

       Of what areas read.2SG the best   poems   of friend

Such incorporated determiners act as "gates" for extraction from islands. Interestingly, D-incorporation in Galician is possible not only out of DP objects, but also from subjects (4) and adjuncts (5). Bošković (2011a) claims that D-incorporation out of an adjunct in (5) opens the adjunct gate for extraction (see also below and fn.3):

(4)   Merda fixested-los fachas

       shit   did-the   fascists

       'You fascists did nothing!'   (Uriagereka 1988:243)

(5)   a. **chegamo-la** semana pasada

       arrived-the last week

       'We arrived last week.'

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b. ?de que   semana **chegastede-lo** Luns

   of which week   arrived.2PL-the Monday

   'Of which week did you guys arrive the Monday.'

<div align="right">Bošković (2011a)</div>

In essence, after the D incorporation the remaining phrase behaves very much like a bare NP in languages without category Determiner with respect to extraction. A number of authors have shown that in languages that do not have strong overt determiners such as definite articles, the category D is not realized (Bošković 2008, Corver 1992, Stjepanović 1998), and instead of DP these languages feature just bare NPs (possibly with some additional functional structure, though never a DP, see Bošković 2011b). Such bare NPs allow wh-extraction out of them:

(6)   a. [Iz   kakogo goroda]$_i$ ty   videl [$_{NP}$ devušek t$_i$]?   [Russian]

   from which   city   you saw   girls

   'Girls from which city did you see?'

   b. cf. *From which city did you see [$_{DP}$ girls t$_i$]?

<div align="right">Stjepanović (1998)</div>

Bošković (2005) argues that D-less languages are also those that allow Left Branch Extraction:

(7)   a. Krasnuju$_i$ ja kupil   [$_{NP}$ t$_i$ mashinu]   [Russian]

   red   I bought   car

   'It is a red car that I bought.'

   b. cf. *Red$_i$ I bought [$_{DP}$ a t$_i$ car]

Left branch specifiers can be extracted from bare NP, not from DPs. This suggests that in D languages, after D-incorporation, DPs behave like NP with respect to extraction, an observation that will become relevant in the following discussion. The generalization in (1) captures that intuition while making use of the notion of HM trace, along the lines of (8) (cf. (2)):[2]

(8)   a. (?)De quén$_j$ liche-**los**$_i$ [$_{DP}$ [$_{D'}$ t$_i$ [$_{NP}$ mellores poemas de amigo t$_j$]]]

          of whom read.2SG-the   best   poems of friend

          'Who did you read the best poems of friendship by?'

       b. *De quén$_j$ liches   [$_{DP}$ [$_{D'}$ **os** mellores poemas de amigo t$_j$]]?

          of whom read.2SG   the best   poems   of friend

1.2. Voiding PP islands

P(reposition)-stranding languages provide another well known illustration of the voiding effect, e.g. in pseudo-passives and wh-questions:

(9)   This book$_i$ has been frequently [referred to] t$_i$

(10)   What$_i$ did he [talk about] t$_i$?

Assuming PPs to be generally islands (cf. the Head Constraint of van Riemsdijk 1978), a special rule of Reanalysis was proposed in the early GB to account for P-stranding (Hornstein and Weinberg 1981). This rule reanalyzes the PP whereby the

preposition becomes part of the selecting predicate. Pseudo-passivization and wh-movement is possible only out of reanalyzed PPs:

(11)   *This city was frequently traveled [to t_i]

(12)   *Which piece$_i$ did John fall asleep [during t_i]?

Even though conditions regulating Reanalysis remain somewhat poorly understood, HM is a very good candidate to be part of the explanation of the relevant phenomena. Bošković (2011c) relates P-stranding to the generalization in (1) based on a larger sample of cross-linguistic examples involving P-incorporation, many of which again involve incorporation out of an adjunct.[3] If preposition incorporates into a verb, then its complement behaves as bare NP and can be either A- or A'-moved. Once again, incorporation somehow frees the structure removing the island boundary.

1.3. "Repair-by-deletion"

Bošković (2011c) offers an interpretation of (1) via the "repair-by-PF deletion" strategy. The original "repair-by-deletion" account of Chomsky (1972) was concerned with the important observation in Ross (1969) that ellipsis voids the island effect. Recently, the issue was revived and became a topic of extensive discussion in the literature (see especially works by H. Lasnik and J. Merchant and colleagues on the issue, starting from Merchant 1999). This is illustrated in (13) (deletion is indicated with strikethrough):

(13)   a. *That he will hire someone is possible, but I will not divulge who$_i$ [[$_{Island}$ that he will hire t$_i$] is possible].

        b. That he will hire someone is possible, but I will not divulge who$_i$ [[~~$_{Island}$ that he will hire t$_i$] is possible~~].

(Ross 1969:277)

Chomsky originally suggests putting a # on an island crossed by a movement operation. If the # remains in the final structure, a violation occurs. However, if some later operation such as ellipsis erases the #, then no information about a possible violation is retained in the final representation. Bošković (2011c) explores this idea in the context of copy deletion and suggests that (1) can be reduced to the "repair-by-deletion" scheme if one assumes that the # (Bošković and other authors use the star * instead) is assigned not to an island boundary (e.g. CP) but to its head. In particular, in (8b) the star is placed on t$_i$ upon the alleged wh-movement. PF operations delete t$_i$, which actually is a silent copy of the moved head, thus avoiding incurring a violation.

Attributing the voiding effect to the "repair-by-deletion"-like scenario captures obvious similarities between ellipsis and deletion of copies, but the resulting picture is unnecessarily complicated in the minimalist context, while carrying a fair amount of stipulation. It is not clear whether both syntactic and PF components should have to be involved here. Importantly, the star assigning convention violates the Inclusiveness condition (the ban on introducing entities not present in the Numeration), a fundamental piece of the minimalist architecture.[4] In addition, the account bears on rather technical issues concerning where the star is assigned, that are difficult to

substantiate. Below I outline an alternative line of explanation of the island voiding effect that avoids the complicating #/* assigning convention altogether.

2. Islands not headed by traces

(1) is based on the underlying assumption that HM leaves a trace/copy in the base position. The trace assumption is carried over from the Government-Binding framework and reflects general considerations of phrase structure preservation and derivational history. In particular, if some head α has projected to a phrase αP and then moved away from its phrase to adjoin to head β, the trace/copy symbol reassures that the derivation keeps the information that αP is a projection of α:

(14) $[_{\beta P} \ldots \alpha+\beta \ldots [_{\alpha P} \ldots t_\alpha \ldots]]$

Several points are noteworthy in this analysis. Apart from the issues pointed out in the beginning, a major difference between HM and XP movement is that the element that moves is also the one that leaves behind a phrase carrying its label. In a sense, head X after movement belongs in two places simultaneously: XP and YP. This intuition has been recognized a while ago, and was encoded in Government and Binding framework. One prominent example is Baker's Government Transparency corollary, whereby a lexical category with an item incorporated into it is assumed to govern everything that the incorporated item governed in its original structural position (Baker 1988).

A similar intuition may in principle be reformulated in minimalism, if HM leaves a trace/copy behind (cf. den Dikken 2007, Gallego 2010 for recent and much

relevant discussion). Consider, however, the possibility that it does not. First, the entire line of thought attributing HM to the PF component implicitly entails that HM traces are not seen to play a significant syntactic role. Second, previous discussion of the relation between the traces of moved element and their LF interpretation, in particular in the context of reconstruction, has concentrated mostly on XPs. Chomsky (1995: ch.3) notes that reconstruction is a general property of A'-movement creating operator-variable chains. With respect to A-movement, Chomsky notes the absence of reconstruction effects in general and suggests that traces of A-movement, unlike those of A'-movement, are ignored by interpretive components such as LF. Lasnik (1999) further explores this argument evaluating it on a wide range of relevant constructions and suggests that the lack of reconstruction effects with A-movement indicates absence of relevant trace/copies of A-movement altogether. This move is also appealing given the minimalist consideration of conceptual necessity: if an element plays no role in the computation, it may not be there at all.[5]

This reasoning is relevant in the case of HM to the extent base copies of HM do not play in a role in LF interpretation either. There are two cases of HM recently claimed in the literature to have an effect on LF interpretation (see also Lambova 2004 for the claim tha heads can undergo focus movement). One concerns licensing NPIs under HM (Roberts 2011, Kayne 2000:44), as illustrated in (15):

(15)   a. *Which one of them does anybody not like?

        b. Which one of them does*n't* anybody *t* like?

Under the standard assumption that NPIs must be c-commanded by their licensers at

LF, movement of negation changes c-command relations in a way that yields a well formed LF representation. The other case concerns positioning of certain modals with respect to clause-mate quantifiers, discussed in detail in Lechner (2006) and illustrated in (16):

(16)   Not every pearl can be above average size $\neg \Diamond > \forall$

      'It is not possible that every pearl is above average size.'

In (16), the modal can take scope over the quantifier resulting in the inverse scope configuration. Lechner further argues that the position in which the quantifier is interpreted (bold $\mathbf{t_{QP}}$ in (17)) is above the base-generated position of the modal.

(17)   …QP…Mod…$\mathbf{t_{QP}}$…$\mathbf{t_{Mod}}$… t_{QP}

It follows that the modal has to be interpreted in the derived position. Note, however, that in both these cases what gets interpreted under this analysis is the higher copy of the moved head. The lower copy that would correspond to the trace/copy, still plays no role for LF interpretation.[6]

      Let us then suppose that syntactic HM does not leave a trace/copy at all.[7] Then instead of the situation depicted in (14) we should have something like (18):

(18) $[_{\beta P} \ldots \alpha + \beta \ldots [_{\alpha P} \ldots]]$

But this configuration simply cannot arise because it violates the fundamentally

endocentric character of phrases. Unlike the case of A-movement which originates from a specifier or complement position of some head α heading a phrase αP, that is, from a non-projecting position, traceless HM of head α does affect the core head-centered skeleton of αP in a fatal way: it ceases to exist. This is straightforward in the framework of bare phrase structure where labels (if they exist at all) are relationally determined. If α projects, the label of the resulting object is labeled identical to the head (that is, α). When α moves away, the projection of α in the base position collapses, along with its label.

Consider abstractly what this implies for the structure of the vanishing phrase. Suppose a head α takes YP as a complement forming αP which is then selected by another head β. β probes for α and α raises. αP collapses, and YP becomes a complement of the conglomerate head, as depicted below:[8]

(19)
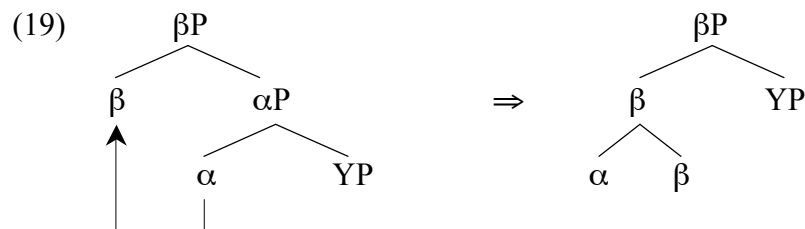
HM of α to β may proceed either as simple head adjunction as in (19) or by formation of a complex $\alpha + \beta$ cluster and possible relabeling of the phrase $(\alpha + \beta)P$. The choice between these possibilities in each particular case is possibly constrained by considerations of selection, feature sharing, theta-role assignment etc. For the moment, this is immaterial. The crucial point is the disappearance of αP. If αP happens to be an island, in particular, a DP or a PP island, then the island voiding effect follows directly from the traceless HM.

Bošković's account of the voiding effect in (1) in the end converges on the same conclusion: that traces do not head islands. But while for Bošković this is a result of a series of manipulations involving both syntax (leaving the trace, inspecting the island, assigning a * to its head) and PF component (deleting the trace and the *), I suggest that it may not be necessary to use this set of conceptual tools to create a trace and then delete it. Rather, the voiding effect with HM largely follows from endocentricity and the relational character of labels in bare phrase structure, a minimal assumption if bare phrase structure reflects an optimal language design. The voiding effect arises exactly in those cases of HM that leave no trace (perhaps all), thus make no use of alleged lower copies.

Recall that properties 4) and 5) of HM mentioned in the introduction as oddities for minimalist syntax have to do with traces that it supposedly leaves: they are not c-commanded by the moving element, and they are not licensed (violating the Head Movement Constraint or Empty Category Principle depending on the view) in excorporation contexts which would otherwise appear natural HM counterparts of successive cyclic XP movement. If syntactic HM does not leave trace/copy at all, then properties 4) and 5) may no longer be relevant in light of the minimalist guidelines, and can be removed from the list of oddities for syntactic HM altogether.

There are reasons to think that the same can be said about the remaining properties 1)-3). 1) is challenged by the "gate-opening" character of incorporation, illustrated in basic cases like (2) and (3) (which was already pointed out by Uriagereka 1988), as well as by cases involving Roberts' and Lechner's cases of NPI licensing and modals, respectively. Concerning 3), note that there is no acyclicity problem from the Probe-Goal perspective, since the probing head c-commands the

head it is probing (see Epstein 2001). Finally, the triggers argument 2) can be questioned as well. For instance, one may imagine postulating a trigger for syntactic V-to-T movement (e.g. T or V-feature), which does not seem to be an obviously worse candidate than, for instance, feature [+wh] for wh-movement.

3. Residual wh-scope marking

Stepanov and Stateva (2006) suggest an account much along the lines of (19) in their theory of successive cyclicity in wh-movement (possibly extendable to other A'-contexts):

(20)   Who$_i$ do you believe t$_i$ Peter likes t$_i$?

Stepanov and Stateva advance a proposal that the successive cyclic property of long-distance wh-movement in languages like English is due to a residual wh-scope marking structure in these languages. Consider a typical wh-scope marking question:

(21)   [$_{CP}$ Was   glaubst du [$_{CP}$ wen$_i$ Maria gesehen t$_i$ hat]]?   [German]
             what think   you   whom Maria seen   has
        'Who do you think Maria saw?'

In (21), there are two clause-bound wh-dependencies, one of which is headed by a "wh-scope marker" such as German *was* which, as the translation of (21) suggests, appears to mark the high (matrix) scope of the other wh-phrase. Under the analysis known as Indirect Dependency, however, the "wh-scope marker" is an independent

contentful wh-phrase itself. Under some versions of Indirect Dependency, the wh-scope marker is a wh-head W which forms a constituent with the embedded wh-clause at D-structure (and has a semantic type function that takes the embedded question as an argument at LF; see Dayal 1996, 2000, Mahajan 2000, Stepanov 2000, among others), as illustrated in (22):

(22) $[_{CP[+Q]}$ … V $[_{WP}$ W $[_{CP[+Q]}$ wh… … …t_i…$]]]$

Note that the structure of WP s closely reminiscent of a complex DP island and is also in line with the views in the literature treating finite complementation in terms of NP/DP-shell (Müller and Sternefeld 1995, Bayer 1996, Stepanov 2001). The main relevance of this type of question in the context of successive cyclicity is that in constructions such as (21) all CPs are marked [+Q], which provides a potentially relevant context for successive checking of all [+Q] features by a single wh-phrase, rather than locally by different elements (e.g. a wh-phrase and a wh-scope marker). The challenge is thus to circumvent the island. Stepanov and Stateva suggest that the D-structure in wh-scope marking languages as well as in "long-distance wh-movement" languages is basically the same, namely, that in (22). In the course of the derivation W can either overtly move to the matrix CP domain, as in German, Russian or Hungarian, stay in situ, as in Hindi, or incorporate into the selecting V (propositional attitude verb), as in English and other long-distance movement languages. Whether W incorporates into V or not depends on the morphological status of W: if W is an affix, it incorporates, if not (as German *was*), it does not incorporate. The incorporation option is realized along the lines of (19). In particular, with the

derivation of (20) proceeding bottom up, an embedded question CP is formed and local wh-movement takes place:

(23) $[_{CP[+Q]}$ who$_i$ Peter likes t$_i$]

Then a W (in English, phonologically null) Merges in taking the CP in (23) as a complement, forming a WP and the matrix V is Merged. At this point, W undergoes traceless HM incorporating into V forming a complex predicate. The WP ceases to exist:

(24)   believe $[_{WP}$ W $[_{CP[+Q]}$ who$_i$ Peter likes t$_i$]]   →

         $[_{VP}$ believe+W $[_{CP[+Q]}$ who$_i$ Peter likes t$_i$]]]

The Wh-phrase in the Spec of the embedded CP can now make a further step to the matrix Spec-CP (Stepanov and Stateva assume that the wh-phrase can check its [+wh]-feature more than once). Successive checking of [+Q] features of Cs along the way is thus responsible for the successive cyclic effect. The main advantage of this island-voiding perspective of successive cyclicity is that it allows one to unify seemingly unrelated types of interrogative constructions such as wh-scope marking and long-distance wh-questions under a common derivational history and associate general principles of structure building with language-specific morphology (namely, the make-up of W), deriving the relevant patterns across a wide range of cross-linguistic material (see the above work for details).[9]

4. Specifiers, adjuncts and flattening constituent structure

One further consequence of traceless HM has to do with an interesting phrase structural effect concerning disappearance of a phrase after incorporation of its head. Note that upon collapsing of the original αP in (19) the YP - the complement of α - automatically becomes a complement of the new conglomerate head which I designated as $\alpha + \beta$. The question now arises, what happens in a more complex case when the original αP has a richer structure including not only complement YP, but also specifier(s), as well as adjoined XPs.

These more complicated cases naturally fall into the "domain flattening" account of Kiss (2008) (though not directly into the generalization in (1)). Kiss proposes the following:

(25)   When a V is moved into a functional head, the maximal constituents in its internal domain become freely permutable sister nodes.

(Kiss 2008:459)

In line with Chomsky (1995), the internal domain of V-chain includes complement of V, specifiers of intermediate verbal projections and anything adjoined to intermediate verbal projections (but not subdomains thereof). (25) allows for a straightforward account of the otherwise puzzling patterns of Hungarian word orders whereby word order is fixed in the preverbal domain, but is free postverbally. Furthermore, Kiss shows that the free postverbal order correlates with a flat structure of verbal constituents which can be probed, in particular, by condition C.[10] Kiss argues that raising the verb as high as T (and verbal particle in Spec-TP) leaves a verbal

projection (PredP for Kiss) headless and causes its collapse, whereby its major constituents are linearized at random in syntactic component.[11,12]

(26)   a. [TP Össze [T′ vesztek [PredP a   fiúk egymással]]]   (Kiss' (54))

            out   fell   the boys each-other-with

        'The boys fell out with each other.'

        b. [TP Össze [T′ vesztek [PredP egymással   a   fiúk]]]

            out   fell   each-other-with the boys

Kiss further suggests that (25) is a property of phases, and proposes to generalize (25) to (27):

(27)   Domain flattening: When the head of a phase is moved into the head position

        of the next higher phase, the silent copies of the moved head and their

        projections are pruned.   (Kiss 2008:462)

Pruning is an extra operation, an add-on to bare phrase structure similarly to PF deletion in Bošković's system. But under the proposed traceless HM, introduction of this operation, thus stipulating either (25) or (27), can be avoided without loss of generality, since there is trivially no need to worry about silent copies. The proposal I outline here thus unifies Kiss's domain flattening account and Bošković's generalization in (1). Furthermore, if DPs and PPs can be shown to be phases, as they are often claimed to be (cf. Abels 2003, Chomsky 2007, Svenonius 2004, van Riemsdijk 1978, among others), then Kiss's conjecture about the relevance of phases

can be straightforwardly reinterpreted as to pertain to traceless HM in general. This seems a promising venue for further exploration.

5. Concluding remarks

At least some cases of HM can be beneficially viewed as part of the narrow syntax. This claim, under the bare phrase structure encoding of endocentricity and the idea that syntactic HM does not leave traces/copies, provides a natural account of collapsing XP domains responsible for the island voiding effect. Put in other words, the island voiding effect, seen in conjunction with the "domain flattening" effect, suggests that if HM exists in the syntax, it may very well be traceless.

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Notes

[1] See also Bayer (2008) for an argument that the V2 phenomenon in certain varieties of German involves displacement only of a phonological matrix of the verb.

[2] Uriagereka's (1988) original account of (2)-(3) is different from Bošković's in that it does not appeal to traces: for Uriagereka, any phonologically null head fails to project a barrier.

[3] This includes for instance, P incorporation out of manner adverbials in Kinyarwanda (i), but also the possibility of N/P incorporation in reason adverbials in Chichewa, and passive by-phrases in Southern Tiwa and other languages, discussed in Baker (1988).

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

         Man   SP.PRES.**read**.ASP letter   **with**-joy

         'The man is reading a 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)

Bošković (2011a) uses these data to argue, contra Baker, that HM/incorporation out of islands, including adjuncts, is in fact possible, and that the previous explanations banning this kind of HM overlooked certain intervening factors. Note that among other things, this opens a potential way of accounting for stranding of an adjunct preposition under wh-movement in terms of the P-incorporation analysis of P-stranding (cf. *Who did you come with*?).

[4] See Lasnik (2001) for a proposal dealing with this problem under the Minimalist assumptions.

[5] See also Fox (1999) who argues that A-movement does reconstruct (and lower copies are interpreted) in some cases. He proposes that A-movement leaves a trace (not copy) only in those cases. For my purposes here, even this weaker version of A-movement reconstruction theory will suffice. Boeckx (2001) argues that cases of apparent reconstruction with A movement can be accounted for by literal lowering if the A-moved element, rather than interpreting the lower copy.

[6] Note also that work on the semantics of incorporation in the framework of transparent LF suggests that it is the incorporated, not base, positions that are

interpreted for semantic purposes, in particular, in the context of theories of indefinites (van Geenhoven 1998, Wharram 2003). Lechner (2006) also notes instances such as, e.g. *You can always [can] count on me* where as he claims the wide scope of *always* with respect to *can* cannot be derived by raising *always* at LF. Whether the scope of adverbials like *always* can be reliably derived via their LF movement in the first place is not entirely clear, but instances like these should be taken into account in any case when ultimately delimiting the extent to which HM may be traceless. I thank an *LI* reviewer for reminding me of these instances.

[7] Platzack (1986) and Thráinsson (1986) have previously considered a possibility that V-movement does not leave a trace in Scandinavian languages.

[8] An *LI* reviewer points out that the result of collapsing αP in (19) is very similar to the treatment of restructuring/nominative objects in Japanese in Saito and Hoshi (1998), which for these authors involves direct head Merger.

[9] Translated into the framework making use of traces of HM, the residual wh-scope marking phenomenon thus further strengthens the generalization in (1) (though Bošković 2011c does not discuss this phenomenon).

[10] For instance, the Hungarian counterpart of *John$_i$'s mother loves him$_i$* does not allow the indicated coreference suggesting that the genitive specifier and verbal object c-command each other. The same concerns various V' adjuncts. However, when a verb-related constituent is focused by moving to a special Focus position preverbally, the usual asymmetric tests for constituent structure hold.

[11] Kiss argues, more precisely, that when syntax does not force a particular linear order of constituents, the latter are ordered in Hungarian by increasing phonological

weight. See Kiss (2008) for details. Note also that the domain-flattening account of V-to-T movement appears in line not with the more traditional "configurational" view on theta-role assignment (in this case, by V), but, rather, with the alternative perspective seeing theta-roles as features (Hornstein 2001, Lasnik 1995 among others) which can be checked, for instance, prior to V-movement.

[12] Concerning the question why other V-raising languages (Kiss tentatively mentions Scandinavian in this regard, an anomyous *LI* reviewer also mentions French) do not display the domain flattening effect similarly freeing the order of their constituents, Kiss suggests that in those languages, unlike in Hungarian, Nominative checking requires the subject to move to Spec-IP/TP, which ensures that it will occupy a structurally higher position even after the flattening. Pursuing this line further, we may in principle conceive a similar scenario for direct and/or indirect objects, at least some of which must evacuate the VP moving into higher functional projections (e.g. Agr-related) which themselves are hierarchically ordered, as, e.g. in earlier minimalist conceptions of clause structure. See also Hoffman (1995) for a theory of scrambling along the lines similar to Kiss'.