

Derivation versus representation: Evidence from Minimality effects in adverb movement*

Rebecca Shields
University of Wisconsin-Madison

1 Introduction

One influential trend in recent generative linguistics has been to abandon representational models of constraints on movement in favor of strictly derivational ones (e.g. Chomsky 1995, Epstein & Seely 2002). Some researchers, however, have argued that the grammar must include at least some representational conditions (Lasnik 2001, Aoun & Li 2003, Boeckx & Lasnik 2006). This paper provides new data on adverb movement in support of the latter view.

The core puzzle is this: in Russian, Japanese, and Korean, long-distance scrambling of adverbs gives rise to Relativized Minimality (RM) effects when the movement crosses an intervening adverb, as expected.¹

* Thanks to the following people for providing grammaticality judgments: Iljoo Ha, Alexandra Galambos, Kyrill Gerasimov, Maria Goretskaya, Lydia Grebenyova, Aleksey Malyutin, Alexandra Pavlova, Anton Polesky, and Yasuhiro Sasahira. I would also like to thank Vivian Lin, Yafei Li, and the participants of WIGL 5 for their comments and suggestions.

¹ LD-adverb scrambling in Russian is quite colloquial and appears to be grammatically more limited than it is in Japanese or Korean. It is easiest to get out of a non-finite embedded clause (infinitive or subjunctive, as in (1) above), and some speakers reject it entirely. The judgments on LD-scrambling reported here are those of one speaker, who finds the base LD-scrambling cases to be quite good. Russian speakers consistently report a significant decrease in acceptability on the downstairs reading if the LD-scrambled adverb is semantically compatible with the upstairs predicate, as do Japanese and Korean speakers occasionally. I will not address the additional factors limiting LD-scrambling here. In this paper we are concerned with contrasts such as that in (1), for those cases where the (a) sentences are independently acceptable.

- (1) a. Ja **bystro**_i xochu [chtoby ona t_i zavodilas’]. (Russian)
 I **quickly**_i want [that it t_i started]
 ‘I want it to start quickly.’
- b. *Ja **bystro**_i xochu [chtoby ona **chasto** t_i zavodilas’].
 I **quickly**_i want [that she **often** t_i started]
 ‘I want it to often start quickly.’
- (2) a. **Hayaku**_i, boku-wa [Peter-ga t_i kuruma-o unten-suru to]
Fast_i I-TOP Peter-NOM t_i car-ACC drive that
 sinjite-iru. (Japanese)
 believe
 ‘I believe that Peter drives fast.’
- b. ***Hayaku**_i, boku-wa [Peter-ga **hinpan-ni** t_i kuruma-o unten-suru to]
Fast_i I-TOP Peter-NOM **frequently** t_i car-ACC drive that
 sinjite-iru.
 believe
 ‘I believe that Peter frequently drives fast.’
- (3) a. ? **Ppalli**_i na-nun [Mary-ka t_i wuncenha-ntako] tul-ess-ta. (Korean)
Fast_i I-TOP M-NOM t_i drive-that heard
 ‘I heard that Mary drives fast.’
- b. ??? (Acwu) **ppalli**_i na-nun [Mary-ka **cacwu** t_i wuncenha-ntako]
 (Very) **fast**_i I-TOP M-NOM **frequently** t_i drive-that
 tul-ess-ta.
 heard
 ‘I heard that Mary frequently drives (very) fast.’

However, some instances of local adverb scrambling in these languages can cross an intervener unscathed:

- (4) a. Ona **chasto bystro** zavodilas’]. (Russian)
 It **often quickly** started
 ‘It often started quickly.’

- b. Ona **bystro chasto** t_i zavodilas'.
It **quickly_i often** t_i started
- (5) a. Sore-wa **hinpan-ni subayaku** hassinsu-ru (Japanese)
It-TOP **frequently quickly** start-NonPast
'It frequently started quickly.'
- b. Sore-wa **subayaku_i hinpan-ni** t_i hassinsu-ru
It-TOP **quickly_i frequently** t_i start-NonPast
- (6) a. Mary-nun **cacwu ppalli** chayk-ul ilk-nunta. (Korean)
M-TOP **frequently fast** book-ACC read
'Mary frequently read books fast'
- b. ?**Ppalli_i** Mary-nun **cacwu** t_i chayk-ul ilk-nun-ta.
Fast_i M-TOP **frequently** t_i book-ACC read

Given (1-3), the shorter movement clearly cannot feed the longer movement, although it was during the shorter movement that the intervener was crossed. These facts are difficult to accommodate in a purely derivational grammar, and appear to require a representational treatment. I will propose a modification to Rizzi's (2001) representational definition of RM, which will expand Rizzi's notion of Minimal Configuration to include extremely local scrambling scenarios like those in (4-6).

The paper is structured as follows: section 2 provides some background information and necessary assumptions. In section 3 I present the adverb scrambling facts in more detail, and section 4 contains the proposed analysis. Finally, the implications for the derivational/representational debate are discussed in section 5.

2 Background: Adverbs and Minimality

2.1 Hierarchy of adverbs

Numerous researchers have noted that adverbs fall into semantically coherent classes, and that their syntactic behavior is determined to at least some extent by their class membership (Heny 1973, Thomason and Stalnaker 1973, McCawley 1983, among many others). In this paper I will assume essentially the theory developed in Cinque (1999), which captures these facts by positing that adverb phrases are specifiers of functional heads projected in a strict hierarchy above the verb. A subset of Cinque's hierarchy is given in (7), where ">" stands for

“asymmetrically c-commands.” A few examples of adverbs from each of these classes are given in (8).

(7) evaluative > evidential > volitional > frequency > manner > resultative

(8) **evaluative:** unexpectedly, fortunately
evidential: apparently, presumably
volitional: intentionally, willingly
frequency: regularly, often
manner: loudly, rudely, awkwardly
resultative: slice something thinly, plant something deeply

2.2 Relativized Minimality (Rizzi 1990, 2001)

I will also be taking as a starting point the Relativized Minimality Condition of Rizzi (1990, 2001). The (2001) formulation is given in (9).

(9) **Relativized Minimality Condition (RMC)**
 Y is in a Minimal Configuration with X iff there is no Z such that
 (i) Z is of the same structural type as X
 (ii) Z intervenes between X and Y

The RMC has the effect of ruling out the configuration in (10), if X c-commands Z, Z c-commands Y, and X and Z are of the same structural type. This means that an element cannot move from Y to X across Z, if Z is of the same type (head, A-specifier, A'-specifier) as X.

(10) *... X_i ... Z ... Y_i ...

The RMC has been claimed to constrain a wide range of movement types, including adverb movement. Rizzi (2001) discusses RM effects in topicalization and V-2 movement of adverbs. Li, Lin, & Shields (2005) discuss how the RMC constrains wh-movement, focalization, and neutral preposing of adverbs. Example (11) is a Dutch paradigm, due originally to Koster (1978), illustrating how the presence of an intervening evaluative adverb blocks the otherwise possible V-2 movement of a lower epistemic adverb.

(11) **RM effects in adverb movement** (Koster 1978, cited in Rizzi 2001)
 a. Helaas_i is hij t_i waarschijnlijk ziek. (Dutch)
 unfortunately_i is he t_i probably sick
 ‘He is unfortunately probably sick.’

- b. Waarschijnlijk_i is hij (*helaas) t_i ziek.
 probably_i is he unfortunately t_i sick

3 Adverb movement and Minimality in scrambling languages

We now return to the adverb movement data from scrambling languages introduced in section 1. As we will see, RM effects appear during “longer” movements, when a moved adverb crosses an intervener two or more classes above it in the hierarchy. Extremely local movements, crossing an intervener “one class up” in the hierarchy, do not show RM effects.

3.1 Long distance scrambling: obeys RMC

As we saw in section 1, LD-scrambling of adverbs in Russian, Japanese, and Korean shows RM effects. This is shown for frequency and manner adverb classes in (12-14). First, note that LD-scrambling of the higher frequency adverb is equally acceptable, irrespective of the presence of a lower manner adverb (a-b sentences). The (b-c) sentences, repeated from (1-3) above, show a contrasting judgment when the lower manner adverb is scrambled. Crossing the higher frequency adverb results in a significant decrease in acceptability, as expected given the RMC.

- (12) a. ? Ja **chasto**_i xochu [chtoby ona t_i zavodilas’].
 I **often**_i want [that she t_i started]
 ‘I want it to start often.’
- b. ? Ja **chasto**_i xochu [chtoby ona t_i **bystro** zavodilas’].
 I **often**_i want [that she t_i **quickly** started]
 ‘I want it to often start quickly.’
- c. Ja **bystro**_i xochu [chtoby ona t_i zavodilas’].
 I **quickly**_i want [that she t_i started]
 ‘I want it to start quickly.’
- d. * Ja **bystro**_i xochu [chtoby ona **chasto** t_i zavodilas’].
 I **quickly**_i want [that she **often** t_i started]
 ‘I want it to often start quickly.’

- (13) a. **Hinpan-ni_i**, boku-wa [Peter-ga t_i kuruma-o unten-suru to]
Frequently_i I-TOP Peter-NOM t_i car-ACC drive that
 sinjite-iru.
 believe
 ‘I believe that Peter frequently drives.’
- b. **Hinpan-ni_i**, boku-wa [Peter-ga t_i **hayaku** kuruma-o unten-suru
Frequently_i I-TOP Peter-NOM t_i **fast** car-ACC drive
 to] sinjite-iru.
 that believe
 ‘I believe that Peter frequently drives fast.’
- c. **Hayaku_i**, boku-wa [Peter-ga t_i kuruma-o unten-suru to]
Fast_i I-TOP Peter-NOM t_i car-ACC drive that
 sinjite-iru.
 believe
 ‘I believe that Peter drives fast.’
- b. * **Hayaku_i**, boku-wa [Peter-ga **hinpan-ni** t_i kuruma-o unten-suru to]
Fast_i I-TOP Peter-NOM **frequently** t_i car-ACC drive
 sinjite-iru.
 that believe
 ‘I believe that Peter frequently drives fast.’
- (14) a. **Cacwu_i** na-nun [Mary-ka t_i wuncenha-ntako] tul-ess-ta.
Frequently_i I-TOP M-NOM t_i drive-that heard
 ‘I heard that Mary frequently drives.’
- b. (Acwu) **cacwu_i** na-nun [Mary-ka t_i **ppalli** wuncenha-ntako]
 (Very) **frequently_i** I-TOP M-NOM t_i **fast** drive-that
 tul-ess-ta.
 heard
 ‘I heard that Mary (very) frequently drives fast.’

- c. ? **Ppalli**_i na-nun [Mary-ka t_i wuncenha-ntako] tul-ess-ta.
Fast_i I-TOP M-NOM t_i drive-that heard
 ‘I heard that Mary drives fast.’
- d.??? (Acwu) **ppalli**_i na-nun [Mary-ka **cacwu** t_i wuncenha-ntako]
 (Very) **fast**_i I-TOP M-NOM **frequently** t_i drive-that
 tul-ess-ta.
 heard
 ‘I heard that Mary frequently drives (very) fast.’

3.2 Local scrambling across two or more adverb classes: obeys RMC

For local scrambling, whether or not the movement obeys the RMC appears to depend on the distance between the moving adverb and the intervening adverb in terms of Cinque’s hierarchy. In this section I present data in which an RM effect obtains as expected. This is the case whenever the moving adverb and the intervener are two or more classes apart in the adverb hierarchy. For convenience, the examples are grouped into subsections, each labeled with the relevant subset of the hierarchy and with the featured adverbs in bold.

3.2.1 Evaluative > evidential > volitional > frequency > **manner**

- (15) a. On **neozhidanno gromko** vsem rasskazal.
 He **unexpectedly loudly** everyone.DAT told
 ‘He unexpectedly told everyone loudly.’
- b. * On **gromko**_i **neozhidanno** t_i vsem rasskazal.
 He **loudly**_i **unexpectedly** t_i everyone.DAT told
- (16) a. **Neozhidanno**_i on t_i **gromko** vsem rasskazal.
Unexpectedly_i he t_i **loudly** everyone.DAT told
 ‘He unexpectedly told everyone loudly.’
- b. * **Gromko**_i on **neozhidanno** t_i vsem rasskazal.
Loudly_i he **unexpectedly** t_i everyone.DAT told
- (17) a. Kare-wa **fui-ni** **oo-goe-de** min’na-ni it-ta
 He-TOP **unexpectedly big-voice-in** everyone-DAT said
 ‘He unexpectedly told everyone loudly.’

- b. ??Kare-wa **oo-goe-de_i** **fui-ni** t_i min'na-ni it-ta
 He-TOP **big-voice-in_i** **unexpectedly** t_i everyone-DAT said
- (18) a. Nay-ka **tahayngi** brake-lul **ppalli** palp-ass-ta.
 I-NOM **fortunately** brake-ACC **quickly** put-PAST-DECL.
 'I fortunately pushed the brake quickly.'
- b.??* **Ppalli_i** nay-ka **tahayngi** brake-lul t_i palp-ass-ta.
Quickly I-NOM **fortunately** brake-ACC t_i put-PAST-DECL.

3.2.2 Evaluative > evidential > volitional > frequency > manner > **resultative**

- (19) a. On **neozhidanno shiroko** raspaxnul dver'.
 He **unexpectedly widely** flung.open door
 'He unexpectedly flung open the door widely.'
- b. * On **shiroko_i** **neozhidanno** t_i raspaxnul dver'.
 He **widely_i** **unexpectedly** t_i flung.open door

3.2.3 Evidential > volitional > frequency > **manner**

- (20) a. On **predpolozhitel'no/ochevidno gromko** vsem rasskazal.
 he **presumably/ obviously loudly** everyone.DAT told
 'He presumably/obviously told everyone loudly.'
- b. * On **gromko_i** **predpolozhitel'no/ochevidno** t_i vsem rasskazal.²
 he **loudly_i** **presumably/ obviously** t_i everyone.DAT told
- (21) a. **Predpolozhitel'no_i/ochevidno_i** on t_i **gromko** vsem rasskazal.
Presumably_i/ obviously_i he t_i **loudly** everyone.DAT told
 'He presumably/obviously told everyone loudly.'
- b. * **Gromko_i** on **predpolozhitel'no/ochevidno** t_i vsem rasskazal.
Loudly_i he **presumably/ obviously** t_i everyone.DAT told

² Ungrammatical on the evidential reading of *ochevidno*. As *ochevidno* also has a manner reading, this sentence is grammatical on the irrelevant interpretation 'he told loudly in an obvious manner'

3.2.4 Volitional > frequency > manner

- (22) a. Palachi **dobrovol'no zhestoko** muchili plennikov.
Executioners **willingly cruelly** tortured prisoners
'The executioners willingly cruelly tortured the prisoners.'
- b. * Palachi **zhestoko_i dobrovol'no** t_i muchili plennikov.
Executioners **cruelly_i willingly** t_i tortured prisoners

3.2.5 Volitional > frequency > manner > resultative

- (23) a. On **narochno shiroko** raspaxnul dver'.
He **intentionally widely** flung.open door
'He intentionally flung open the door widely.'
- b. * On **shiroko_i narochno** t_i raspaxnul dver'.
He **widely_i intentionally** t_i flung.open door

3.2.6 Frequency > manner > resultative

- (24) a. On **ezheminutno shiroko** otkryval dver'.
He **every.minute widely** opened door
'He opened the door widely every minute.'
- b. * On **shiroko ezheminutno** otkryval dver'.
He **widely every.minute** opened door

3.3 Local scrambling across next higher adverb class: no RM effect

What we have seen so far has not been surprising. Moving an adverb across an intervening adverb from a higher class causes a Minimality effect, as expected. We turn to the surprising data in this section. Here we see cases where adverbs can appear in either order, indicating that the lower adverb can move across the higher one unscathed. This is the case when we look at examples involving two adverbs from classes adjacent to each other in the hierarchy.

3.3.1 Volitional > frequency

- (25) a. On **namerenno ezheminutno** vstreval v ix razgovor.
He **intentionally every.minute** interrupted in their conversation
'He intentionally interrupted their conversation every minute.'

- b. On **ezheminutno_i namerenno** t_i vstreval v ix razgovor.
He **every.minute_i intentionally** t_i interrupted in their conversation

3.3.2 Frequency > manner

- (26) a. On **reguljarno grubo** otvechaet.
He **regularly rudely** answers
'He regularly answers rudely.'
- b. On **grubo_i reguljarno** t_i otvechaet.
He **rudely_i regularly** t_i answers
- (27) a. **Reguljarno_i on** t_i **grubo** otvechaet.
Regularly_i he t_i **rudely** answers
'He regularly answers rudely.'
- b. **Grubo_i on reguljarno** t_i otvechaet.
Rudely_i he regularly t_i answers
- (28) a. Sore-wa **hinpan-ni subayaku** hassinsu-ru.
It-TOP **frequently quickly** start-NonPast
'It frequently starts quickly.'
- b. Sore-wa **subayaku_i hinpan-ni** t_i hassinsu-ru.
It-TOP **quickly_i frequently** t_i start-NonPast
- (29) a. Mary-nun **cacwu/congcong ppalli** chayk-ul ilk-nun-ta.
M-TOP **frequently/often fast** book-ACC read
'Mary frequently read books fast'
- b. ? **Ppalli_i Mary-nun cacwu/congcong** t_i chayk-ul ilk-nun-ta.
Fast_i M-TOP frequently/often t_i book-ACC read

3.4 Summary of the data

To summarize, we have seen that adverb scrambling obeys RM (i.e., is ungrammatical in typical RM configurations) whenever the moving adverb crosses an intervener that is not adjacent to it in the hierarchy. In structural terms, this means that an adverb movement is subject to RM only when it crosses two or more maximal projections. Movement that crosses only one maximal projection,

as in the examples in section 3.3, are not constrained by RM. The traditional statement of Minimality (either a representational or a derivational version) obviously cannot accommodate these facts. In the next section I propose an analysis that weakens Rizzi's (2001) representational RM just enough to allow in the grammatical examples in section 3.3, while still ruling out the ungrammatical examples as desired.

4 Proposal: RM only constrains movement that is far enough

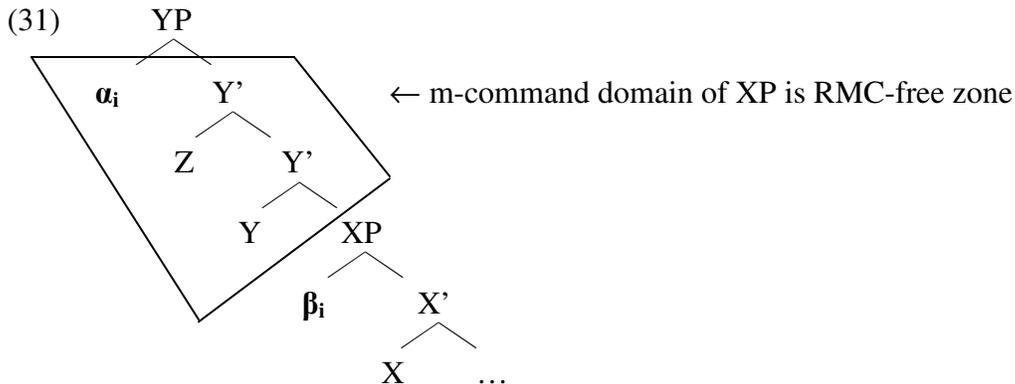
The basic idea behind the proposal is that RM is not a derivational condition on movement in general, but a representational well-formedness constraint on chains whose head and tail are “far enough” apart, in a manner to be made precise. Rizzi (2001) proposed that the head and tail of a chain are required to be in Minimal Configuration at LF in order to be well-formed. For Rizzi, the head and tail of a chain are in a Minimal Configuration only if there is no Minimality violation, in other words if no element intervenes in the chain which could be a potential head of the chain. However, as we have seen, this requirement is too strict – it incorrectly rules out the data in section 3.3 above. What I propose instead is that a chain can meet the requirements of a Minimal Configuration in one of two ways: either the head and tail of the chain can be located in a minimal domain, such that the head of the chain is “visible” to the tail automatically; or, if the head of the chain is not “visible” to the tail by virtue of its position, the head and tail must meet the requirements of standard Minimality.

The relevant minimal domain in this case can be defined in terms of the m-command domain of the node that the tail of the chain is adjoined to. The definition of m-command (from Chomsky 1986, where it is called c-command) is given in (30).

(30) **m-command** (Chomsky 1986):

- 1) The **domain** of α is the least maximal projection containing α .
- 2) α **m-commands** every element of its domain that is not contained within α .

Given the definition in (30), the XP in (31) m-commands the region outlined with a box (the nodes up to, but not including the first maximal projection dominating XP, namely YP). For an adverb adjoined to XP in the base (β in (31)), this zone exactly matches the distance which an adverb may move and still cross an intervener unscathed. In this configuration, the chain [α β] is a well-formed chain, even if the intervening expression Z is of the correct type to potentially cause a Minimality violation.



I will incorporate this observation into the analysis. I propose that Minimality only constrains movement of adverbs that have moved beyond the maximal projection immediately dominating the node they adjoin to in the base, i.e. beyond of the m-command domain of the node they originally adjoined to. In other words, if the head α of the adverb movement chain $[\alpha \beta]$ is within the m-command domain of the node that tail β is adjoined to, the RMC does not apply. Intuitively, this is because the head and tail in this case are automatically “close enough” together to form a coherent chain. I call the maximal projection an adverb must adjoin to in the base the licenser of that adverb chain.

The specific implementation I propose is a modification to Rizzi’s (2001) representational definition of RM. This revised RM expands Rizzi’s notion of Minimal Configuration (MC) by adding the disjoint condition in (32 A) below.

(32) **Revised Relativized Minimality Condition (additions in bold):**

β is in a Minimal Configuration (MC) with α iff **either**

(A) α is located within the m-command domain of the licenser of the chain $[\alpha \beta]$;

or

(B) there is no Z such that

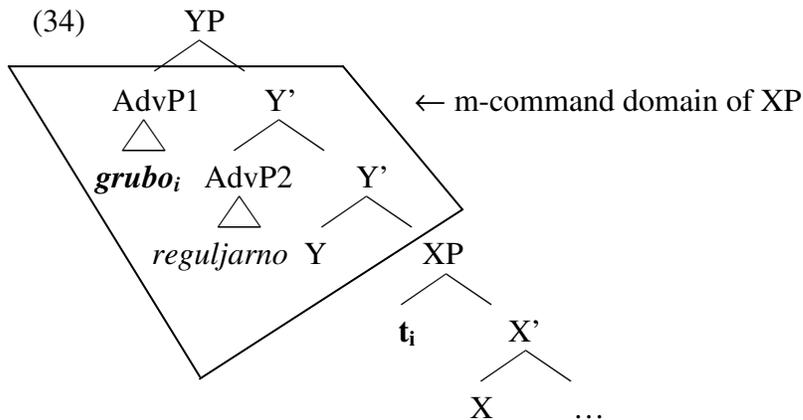
(i) Z is of the same structural type as α

(ii) Z intervenes between α and β

As is standard, we require that the head and tail of a chain be in an MC.

With this revision to RM, scrambling of an adverb from an XP adjoined position to a position within the immediately dominating YP projection will be possible, regardless of the presence of an intervener, because of clause (32 A). This is illustrated in (34) for example (33): here *grubo* ‘rudely’ has scrambled to a position within the m-command domain of XP, the chain’s licenser, therefore *reguljarno* ‘regularly’ does not count as an intervener Z for the chain $[\text{grubo } t]$.

- (33) On **grubo_i** **reguljarno** *t_i* otvechaet.
 He **rudely_i** **regularly** *t_i* answers
 ‘He regularly answers rudely.’



Now let us look at the cases where RM effects do surface. We saw RM effects when adverbs scrambled long-distance or locally crossing two or more maximal projections. Examples of these types are repeated below as (35) and (36).

- (35) * Ja **bystro_i** xochu [chtoby ona **chasto** *t_i* zavodilas’].
 I **quickly_i** want [that she **often** *t_i* started]
 ‘I want it to often start quickly.’
- (36) * On **gromko_i** **predpolozhitel’no/ochevidno** *t_i* vsem rasskazal.
 He **loudly_i** **presumably/ obviously** *t_i* everyone.DAT told
 ‘He presumably/obviously told everyone loudly.’

In (35), the downstairs adverb *bystro* ‘quickly’ has scrambled into the higher clause, well beyond the m-command domain of the phrase it originally adjoined to. Therefore clause (32 A) of the revised RMC is not satisfied. Since there is an intervener Z present (*chasto* ‘often’), clause (32 B) is not satisfied either, and the head and tail of the chain are not in an MC, resulting in ungrammaticality as desired.

In order to rule out examples like (36), we must assume that evaluative and evidential phrases may *not* be projected immediately above the maximal projection that manner adverbs adjoin to. Instead, I will follow the strong hypothesis of Cinque (1999) in assuming that the functional projections in a language’s inventory are *always* projected in the clause, whether or not they contain lexical material. In this case, the evidential phrase in (36) is separated

from the trace of the manner adverb by (at least) volitional and frequency phrases. The manner adverb must have scrambled across at least two maximal projections, moving beyond the m-command domain of its licenser. This results in a configuration in which neither clause of the revised RMC is satisfied, as for (35), with the desired result of ungrammaticality.

We have discussed the analysis for local scrambling targeting a position to the right of the subject, as in (35). However, note that in at least Russian and Korean, RM effects may be obviated in cases of local scrambling targeting a position to the left of the subject as well. An example from Russian which illustrates this is repeated as (37).

- (37) **Grubo_i** on **reguljarno** t_i otvechaet.
Rudely_i he **regularly** t_i answers
 ‘He regularly answers rudely.’

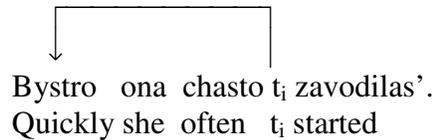
If the subject here were in Spec, TP, then *grubo* ‘rudely’ would have clearly moved beyond the m-command domain of its licenser, and the sentence would be predicted to be ungrammatical on the present analysis. My proposal requires the assumption that the subject is not overtly in Spec, TP in these cases. This is consistent with the standard treatment of Russian arguments: they do not move overtly for Case or other strictly grammatical reasons (Holloway King 1994). Instead, arguments in languages like Russian move out of vP only for discourse-related reasons (i.e., when they scramble), remaining in situ by default. (See also E. Kiss 1995 and the references cited there for similar proposals for a large number of other languages, including Hungarian, Greek, and Korean.)

5 Implications for the derivational/representational debate

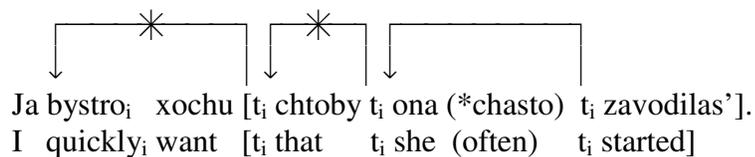
Boeckx & Lasnik (2006) point out that not all Minimality violations are created equal: some (wh-island) are fixable, indicating that they must be treated as representational constraints, while others (Superiority) are not, indicating that they may receive a derivational treatment.

The facts presented in this paper suggest that the RM effects in adverb scrambling require a representational treatment as well. It is difficult to see how the analysis in section 4, or more generally the scrambling facts in section 3, can be accounted for in a purely derivational grammar. The shorter movement of local scrambling is in some cases capable of crossing an intervener (38), but further movement is ruled out if an intervener was crossed in an earlier step (39).

- (38) Step 1: local scrambling of ‘quickly’, crossing an intervener → good



- (39) Steps 2+: LD-scrambling of ‘quickly’ to a higher clause → bad if an intervener was present during step 1, although the derivation no longer has access to step 1 during subsequent steps



It is not clear how this would be captured in a purely derivational approach. In a derivational approach each step is evaluated independently, and the presence of an intervener in a previous step should not have an effect on subsequent steps.

A representational approach, by contrast, evaluates a particular configuration (LF), at which it simultaneously has access to information about the presence of interveners anywhere along the chain as well as the ultimate distance between the head and tail of the chain. This simultaneous access to information that was created during different steps of the derivation is precisely what is required in order to account for the contrast between (38) and (39). I proposed a modified representational RMC which can do just that. The expanded empirical coverage comes at the cost of a complication to the grammar, a disjoint condition on the definition of Minimal Configuration – a cost which I argue is empirically justified. Importantly, it appears that it is simply impossible to modify the derivational approach so that it can handle the facts.

References

- Aoun, Joseph, & Yen-hui Audrey Li. 2003. *Essays on the representational and derivational nature of grammar: The diversity of wh-constructions*. Cambridge, Mass.: MIT Press.
- Bailyn, John. 2004. Generalized inversion. *Natural Language and Linguistic Theory* 22:1-49.
- Boeckx, Cedric, and Howard Lasnik. 2006. Intervention and repair. *Linguistic Inquiry* 37:150-155.
- Chomsky, Noam. 1986. *Knowledge of language*. London: Praeger.

Rebecca Shields

- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads*. New York: Oxford.
- E. Kiss, Katalin, ed. 1995. *Discourse Configurational Languages*. Oxford: Oxford University Press.
- Epstein, Samuel David, Erich M. Groat, Ruriko Kawashima, & Hisatsugu Kitahara. 1998. *A derivational approach to syntactic relations*. Oxford: Oxford University Press.
- Epstein, Samuel David, & T. Daniel Seely, eds. 2002. *Derivation and explanation in the Minimalist Program*. Oxford: Blackwell.
- Henry, Frank. 1973. Sentence and predicate modifiers in English. *Syntax and Semantics* 2:217-45.
- Holloway King, Tracy. 1994. VP-internal subjects in Russian. *Formal Approaches to Slavic Linguistics: The MIT Meeting*, S. Avrutin, S. Franks, & L. Progovac, eds. Ann Arbor: Michigan Slavic Publications. 216-234.
- Koster, Jan. 1978. *Locality Principles in Syntax*. Foris, Dordrecht.
- Lasnik, Howard. 2001. Derivational and representation in modern transformational syntax. *The Handbook of Contemporary Syntactic Theory*, Mark Baltin and Chris Collins, eds. Oxford: Blackwell. 62-88.
- McCawley, James. 1983. The syntax of some English adverbs. *CLS* 19, 263-282.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Rizzi, Luigi. 2001. Relativized Minimality effects. *The Handbook of Contemporary Syntactic Theory*, Mark Baltin and Chris Collins, eds. Oxford: Blackwell. 89-110.
- Thomason, Richmond, and Robert Stalnaker. 1973. A semantic theory of adverbs. *Linguistic Inquiry* 4:195-220.

University of Wisconsin-Madison
Department of Linguistics
1168 Van Hise Hall
1220 Linden Drive
Madison, WI 53706-1557

rashields@wisc.edu