

February 2017 (to appear in *Linguistic Inquiry*)

## On movement out of moved elements, labels, and phases\*

Željko Bošković

**Abstract:** The article provides a deduction of a modified version of the traditional ban on movement out of moved elements which provides a new perspective on the ban in question. Under the proposed analysis, the problem with the movement of YP out of moved element XP does not arise at the point of movement of YP out of XP, as has been previously assumed; the problem arises already with the movement of XP, i.e. XP itself cannot undergo movement in this case—any later movement out of moved XP is then trivially blocked. The proposed analysis leaves room for movement out of moved elements to take place in well-defined contexts, which is shown to be borne out based on several constructions, including German/Dutch *r*-pronoun constructions, Slavic left-branch extraction, and quantifier float more generally. What the proposed analysis deduces is then not the traditional ban on movement out of moved elements, but rather a ban on movement of phases with non-agreeing Specifiers, which the article proposes should replace the traditional ban in question. As a result, the analysis also extends to the immobility of V-2 clauses in German. The paper also provides a new perspective on the Adjunct Condition (i.e. the ban on movement out of adjuncts). It is shown that movement out of adjuncts is possible in the same configuration as movement out of moved elements. The proposed account of the latter is then extended to the Adjunct Condition.

**Keywords:** locality, labels, phases, freezing effects, successive cyclic movement, adjuncts, agreement

### 1. Movement out of moved elements

One of the lines of research within the domain of locality of movement that has attracted a considerable amount of attention concerns freezing effects. Many researchers have argued that movement out of moved elements is not possible. The most explicit early statement of the effect goes back to Culicover and Wexler (1977) and Wexler and Culicover (1980), with early minimalist works such as Ormazabal, Uriagereka, and Uribe-Echevarria (1994) and Takahashi (1994) providing a new perspective on the effect. Many other works have argued for generalizations along the lines of (1), also providing empirical evidence for it; see Ross (1967:160, 1974), Postal (1972), Huybregts (1976), Freidin (1992), Diesing (1992), Collins (1994), Müller (1998, 2010), Lasnik (1999), Stepanov (2001), Rizzi (2006), Boeckx (2008), Gallego (2009), Lohndal (2011), Uriagereka (2012), Corver (in press), among many others.

(1) Movement is not possible out of moved elements.

---

\*This work is based upon research supported by the NSF under Grant BCS-0920888. For helpful comments, I thank two *Linguistic Inquiry* reviewers, the participants of my seminars at the University of Connecticut, and the audiences at CRISSP, KU Leuven (Brussels), University of Geneva, University of Paris 8/L'UMR 7023, Formal Description of Slavic Languages 11 (University of Potsdam), University College London, Formal Approaches to Slavic Linguistics 25 (University of Cornell), and the Brussels Conference on Generative Linguistics 9: Phase Theory.

The works in question provide a battery of arguments for (1). As an illustration, the traditional Subject Condition, which bans extraction out of subjects located in SpecIP, as in (2), is one instantiation of (1), given that under the VP Internal Subject Hypothesis extraction out of a subject in SpecIP involves extraction out of a moved element.

(2) ?\*I wonder [<sub>CP</sub> who<sub>i</sub> [<sub>DP</sub> friends of t<sub>i</sub>]<sub>j</sub> [<sub>VP</sub> t<sub>j</sub> hired Mary]]

Notice in this respect that, as discussed in Stepanov (2007) and Takahashi (1994) with respect to a number of languages, movement from subjects that remain in SpecvP is possible, which led Stepanov (2007) and Takahashi (1994) to blame the ungrammaticality of (2) on the moved status of the subject in this construction. The following contrast from Spanish illustrates the different behavior of unmoved and moved subjects with respect to extraction, (3a) illustrating the former case and (3b) the latter case.<sup>1</sup>

(3) a. ¿De qué conferenciantes<sub>i</sub> te parece que me<sub>z</sub> van  
of what speakers CL-2sg seem-PRES.3SG that CL-1SG go-PRES.3PL  
a impresionar<sub>v</sub> [<sub>v\*P</sub> [<sub>DP</sub> las propuestas t<sub>i</sub>][t<sub>z</sub> t<sub>v</sub>]?  
to to-impress the proposals

b. \*¿De qué conferenciantes<sub>i</sub> te parece que [<sub>DP</sub> las propuestas t<sub>i</sub>]<sub>j</sub>  
of what speakers CL-2sg seem-PRES.3SG that the proposals  
me<sub>z</sub> van a impresionar<sub>v</sub> [<sub>v\*P</sub> t<sub>j</sub> t<sub>z</sub> t<sub>v</sub>]?  
CL-1SG go-PRES.3PL to to-impress

‘Which speakers does it seem to you that the proposals by will impress me?’

(Uriagereka 1988:118)

A number of authors have shown that movement from moved objects is also disallowed. Thus, Lasnik (1999, 2001) argues that objects that survive pseudogapping undergo object shift, pseudogapping involving VP-ellipsis, as in the structure given in (4a). Crucially, movement from a pseudogapping object is not possible. Thus, (4b) contrasts with (5), a contrast which Lasnik

<sup>1</sup>(i) is another acceptable case of extraction from a postverbal subject, which does not involve a psych verb.

(i) ¿De qué equipo<sub>i</sub> dices que han bailado [<sub>DP</sub> dos participantes t<sub>i</sub>]  
of what team say-2sg that have-3pl danced two participants

‘Which team do you say that two members of have danced?’ (Gallego and Uriagereka 2007b:57)

It should be noted that Chomsky (2008) discusses some examples where he claims extraction from subjects is allowed in English, their defining property being that they involve passive/ergative subjects (Chomsky analyzes the relevant cases as involving extraction from the base position, which actually does not violate (1)). The grammaticality status of those cases is rather controversial (see for example the references in Gallego and Uriagereka 2007a) and a number of authors have argued against Chomsky in this respect (Broekhuis 2005, Gallego and Uriagereka 2007a, Lohndal 2007, Boeckx 2008; see especially Broekhuis 2005, who provides evidence that the relevant cases do not involve extraction but base-generation of the relevant element outside of the subject DP, for relevant discussion see also Bošković in preparation).

argues illustrates the different behavior of moved (4b) and unmoved (5) objects with respect to extraction.

- (4) a. Bill selected a painting of John, and Susan should [a photograph of Mary]<sub>i</sub> [<sub>VP</sub> select <sub>t<sub>i</sub></sub>]  
 b. ?\*Who will Bill select a painting of, and who<sub>j</sub> will Susan [a photograph of <sub>t<sub>j</sub></sub>]<sub>i</sub> [<sub>VP</sub> select <sub>t<sub>i</sub></sub>]  
 (5) Who<sub>i</sub> did you select a picture of <sub>t<sub>i</sub></sub>? (Lasnik 2001:110)

The contrast in (6) also shows that moved and unmoved objects differ with respect to extraction, given Lasnik's (1999, 2001) claim that objects that precede particles, as in (6a), undergo object shift (see also Johnson 1991 and Gallego and Uriagereka 2007b).<sup>2</sup>

- (6) a. ?\*Who<sub>j</sub> did Mary call [friends of <sub>t<sub>j</sub></sub>]<sub>i</sub> up <sub>t<sub>i</sub></sub>?  
 b. Who<sub>i</sub> did Mary call up friends of <sub>t<sub>i</sub></sub>? (Lasnik 2001:110)

As another illustration of the effect of (1) on extraction out of objects, Torrego (1998) argues that *a*-marked objects in Spanish undergo movement (more precisely, they undergo object shift). Importantly, extraction out of *a*-marked objects is not possible, in contrast to extraction out of non-*a*-marked objects. The impossibility of extraction out of *a*-marked objects is illustrated by (7).<sup>3</sup>

- (7) ?\*[De quién]<sub>j</sub> has visitado [<sub>DP</sub> a muchos amigos <sub>t<sub>j</sub></sub>]<sub>i</sub> [<sub>VP</sub> ... <sub>t<sub>i</sub></sub>]  
 of whom have-2sg visited a many friends  
 'Who have you visited many friends of?' (Gallego and Uriagereka 2007b:65)

The effect is not limited to extraction out of elements located in A-positions—it also holds for elements located in A'-positions. Thus, a number of authors have shown that extraction out of elements located in SpecCP and out of topics is not possible (on the impossibility of such extraction, see Cinque 1990, Corver in press, Grewendorf 1989, Lasnik and Saito 1992, Müller 1998, 2010, and Takahashi 1994, among many others), as illustrated by the following examples.<sup>4</sup>

<sup>2</sup>Stepanov (2001) argues that the Specificity effect with objects, i.e. the ban on extraction out of specific/definite objects, also follows from (1), given his claim that definite objects undergo movement even in English (see also Diesing 1996).

(i) ?\*Who<sub>i</sub> did you see [this friend of <sub>t<sub>i</sub></sub>]?

<sup>3</sup>See Diesing (1992), Müller (1998), Lohndal (2011), and Corver (in press), among others, on the impossibility of movement out of scrambled/shifted objects in Germanic (but see also Abels 2007 and Neeleman and de Koot 2010).

<sup>4</sup>Torrego (1985) claims that extraction out of SpecCP is possible in Spanish based on examples like (i). However, Gallego (2007) shows such examples involve a prothetic object, the extracted element being an object of the higher verb, as in the structure in (ii). When the prothetic object option is blocked by a reconstruction effect, as in (iii), such examples become unacceptable (the same quite generally holds with verbs that disallow prothetic objects).

- (8) a. \*Whose books<sub>i</sub> do you think that [reviews of t<sub>i</sub>]<sub>j</sub> John never reads t<sub>j</sub>?  
 (Corver in press:1)
- b. ??/\*Whose book<sub>i</sub> do you wonder [<sub>CP</sub> [how many reviews of t<sub>i</sub>]<sub>j</sub> John read t<sub>j</sub>?  
 (Corver in press:9)

The effect in question also holds for rightward movement (see for example Ross 1967, Wexler and Culicover 1980, Johnson 1986, Lasnik and Saito 1992), as illustrated by (9).

- (9) ?\*What<sub>i</sub> did you see t<sub>j</sub> yesterday [a movie about t<sub>i</sub>]<sub>j</sub>?

As the final argument to be noted here, it is well-known that preposition stranding is not possible after the relevant PP undergoes movement (see for example Postal 1972), which can be taken as another illustration of (1). The impossibility of P-stranding in moved positions is illustrated by (10). ((10a) involves P-stranding during successive-cyclic movement and (10b) involves P-stranding in the topic position.)<sup>5</sup>

- (10) a. \*Which table<sub>i</sub> did you think [<sub>CP</sub> [on t<sub>i</sub>]<sub>j</sub> that [<sub>IP</sub> John put the book t<sub>j</sub>]]?

- 
- (i) Este es el autor del que no sabemos qué libros leer  
 this is the author by whom not (we) know what books read  
 ‘This is the author by whom we don’t know what books to read.’ (Chomsky 1986:25)
- (ii) Este es el autor [del que]<sub>i</sub> no sabemos t<sub>i</sub> [<sub>CP</sub> [qué libros]<sub>j</sub> leer t<sub>j</sub>]
- (iii) \* [<sub>CP</sub> [De qué hijo suyo]<sub>i</sub> C sabes [<sub>CP</sub> [qué novelas t<sub>i</sub>] C ha leído todo padre]<sub>j</sub>]]?  
 of what son his know-2.SG what novels have-3.SG read every father  
 ‘Which son of his do you know which novels by has every father read?’ (Gallego 2007:351)

<sup>5</sup> In this context, a reviewer brings up the swiping construction, illustrated by (i).

(i) John gave a talk, but I don’t know what about.

The exact derivation of (i) is controversial. Hartman and Ai (2007) and Van Craenenbroeck (2010) analyze it as involving movement out of a moved PP, without however accounting for why examples like (10b) are unacceptable. There are also accounts of (i) that are fully compatible with the ban in (1) (and the analysis given below). This is e.g. the case with Merchant (2002), where *what* incorporates into the preposition. Radford and Iwasaki’s (2015) movement-out-of-the-PP account, where the preposition itself also moves, is also compatible with the account of (1) given below under the approach to locality violations from Bošković (2013b). (Under that approach, the analysis of (1) given below would allow movement out of a moved phrase through the rescue-by-PF-deletion mechanism if the phrase head itself undergoes movement, which is what happens under Radford and Iwasaki’s analysis. They in fact also suggest a rescue-by-PF-deletion analysis). Güneş and Lipták’s (2016) observation that the preposition in such examples is assigned stress via the Nuclear Stress Rule (NSR) opens up another way of looking at them. Since the NSR assigns stress to the most deeply embedded pronounced element, Stjepanović (1999, 2003) argues that the NSR can induce pronunciation of a lower copy (under the approach where the highest copy is pronounced unless PF considerations require lower copy pronunciation, see footnote 36). Given the requirement, discussed by Güneş and Lipták, that the preposition in (i) be assigned stress by the NSR, (i) may actually involve PP fronting, with the lower copy of the preposition (possibly in the position where Hartman and Ai 2007 and Van Craenenbroeck 2010 place it) pronounced due to the NSR, as in many other cases of this sort discussed by Stjepanović (see also Bošković and Nunes 2007).

b. \*Which table<sub>i</sub> did you think that [on t<sub>i</sub>]<sub>j</sub> John put the book t<sub>j</sub>?

The literature cited above gives a number of additional arguments for (1). The ban in (1) thus has rather strong empirical support. There have, however, also been claims that there are exceptions to (1).<sup>6</sup> While some are driven primarily by theoretical considerations (Collins 2005a), and some have been explained away (see for example footnote 4), there still remain cases that seem to clearly violate (1). In fact, in contrast to English, Dutch allows preposition stranding after the PP undergoes movement, as in the example in (11), where the preposition *mee* is stranded under wh-movement after the PP headed by *mee* moves from the embedded clause.

(11) waar<sub>i</sub> had jij dan [t<sub>i</sub> *mee* t<sub>i</sub>]<sub>j</sub> gedacht [dat je de vis t<sub>j</sub> zou moeten snijden]?  
where had you then with thought that you the fish would must cut  
'What did you think you should cut the fish with?' (Barbiers 2002:49)

However, such cases are rather exceptional and the arguments for (1) offered in the literature are too numerous and too broad, spanning a variety of constructions and languages, to simply dismiss them (and discard the generalization in (1)). The goal of this article will then be to modify (1) to take into consideration exceptional cases like (11) and to provide a deduction of the modified version of (1). However, the starting point in the discussion will be the traditional generalization in (1), the exceptional cases will be put aside until later in the discussion. Focusing on the generalization in (1), in the next section I will show that (1) falls out as a theorem from the theory of phases (Chomsky 2000, 2001) and the labeling framework of Chomsky (2013, 2015).

In the following section I will first introduce the necessary background regarding the theory of phases and the labeling framework, and then turn to the deduction of (1).<sup>7</sup> As is often the

---

<sup>6</sup>One such exception concerns scrambling in Japanese, movement being allowed out of scrambled phrases in Japanese. (Japanese scrambling is insensitive to some other movement constraints too, e.g. relativized minimality, see Saito and Fukui 1998; see also Bošković 2004b for a general island-weakening effect with Japanese scrambling). Based on this (and other issues), Bošković and Takahashi (1998) argue Japanese scrambling involves base-generation (not movement) of the relevant element, which would make it irrelevant to (1). (PF movement accounts, like Sauerland and Elbourne 2002, also make it irrelevant to (1).) Under the analysis of (1) given below there are also ways of accommodating Japanese scrambling even under an overt syntactic movement analysis. E.g., if, possibly because it involves adjunction, scrambling allows acyclicity, where movement to the edge of a scrambled phrase (which would also involve adjunction) can take place after scrambling itself, movement out of a scrambled phrase would be allowed under the analysis of (1) below. It should also be noted that Saito (2016) argues that due to the lack of agreement, labeling in Japanese proceeds differently from other languages examined in this article. Interestingly, under the account of (1) given below and Saito's approach to labeling in Japanese, movement out of scrambled elements in Japanese is in fact expected to be possible (see footnote 14). Japanese scrambling may thus provide a rather dramatic confirmation of the analysis presented below.

<sup>7</sup>I will not discuss here other attempts to deduce (1), see Corver (in press) for an overview of such attempts. It should also be noted that, as discussed in Abels (2007), some violations of (1) are more degraded than others. I will not have anything to say here about such differences; an additional factor, possibly along the lines of Abels (2007), could be involved. However, given the variety and the subtlety of the differences in

case when a generalization is deduced, we will see that the mechanisms in question do not completely deduce (1); they leave room for extraction out of moved elements to be possible in well-defined contexts. Evidence will be provided that such extraction is indeed possible in the contexts in question ((11) is in fact one of those contexts). The proposed analysis will thus not deduce (1), which rigidly bans movement out of moved elements, but a modified version of (1) which will also be shown to be better supported empirically. The article will thus propose a new generalization which is intended to replace (1).

## **2. Deducing the ban on movement out of moved elements in the phasal/labeling system**

### *2.1. On phases and labels*

Chomsky (2000, 2001) gives a number of criteria that differentiate phases from non-phases. One of these criteria is that only phases can undergo movement, as argued in Chomsky (2000, 2001) (see also Rackowski and Richards 2005, Cheng 2012, Matushansky 2005, Harwood 2013, Legate 2014, Bošković 2015, among others). Assume that this is indeed the case, i.e. that (12) holds.

(12) Only phases can undergo movement.

Now, given the Phase-Impenetrability Condition (PIC), which requires that movement out of phase XP proceed via the edge of XP, movement out of a phase must proceed successive cyclically, targeting the edge of the phase. The PIC has interesting consequences within Chomsky's (2013) labeling system.

Chomsky (2013) proposes a theory of labeling which allows unlabeled objects during the derivation, though not in final representations. According to the labeling algorithm proposed in Chomsky (2013), in a case where a head and a phrase merge, the head projects (i.e. provides the label for the resulting object). Regarding the case where two non-minimal projections (i.e. phrases) merge, Chomsky suggests two ways of implementing labeling, via prominent feature sharing or traces, the crucial assumption with the latter being that traces are ignored for the purpose of labeling. The intuition here is that a trace/lower copy is invisible to the labeling algorithm since it is part of a discontinuous element (i.e. the whole chain; the element to be labeled then does not dominate every occurrence of the relevant moved element). Chomsky unifies this with intervention effects, with traces not functioning as interveners for the same reason.

---

question, it is likely that more than one factor is involved (see here Haegeman, Jiménez-Fernández, and Radford 2014). As an illustration, Bošković (1992) observes a three-way distinction with extraction out of subjects in English: while all relevant cases are degraded, extraction out of subjects of finite clauses headed by *that* is worse than extraction out of finite clauses not introduced by *that*, which is in turn worse than extraction out of ECM infinitival subjects. While the last case could represent the more general infinitival island-weakening effect (some islands, e.g. wh-islands, are often weakened with infinitives), this cannot be responsible for the difference between *that* and *that*-less finite clauses.

To illustrate the feature-sharing case, when *which book* merges with interrogative C (actually CP at the point of merger) in (13), both the wh-phrase and the CP have the Q-feature; what is projected (i.e. determines the label of the resulting object) then is the Q-feature.<sup>8</sup> This is obviously reminiscent of Spec-Head agreement, where the shared feature is what is involved in Spec-head agreement.

(13) I wonder [<sub>CP</sub> which book<sub>i</sub> [<sub>C</sub> C [John bought t<sub>i</sub>]]]

Turning to merger of two phrases that involves label resolution via traces, one such case is given in (14). ((15) gives the relevant structure, discussed below.)

(14) Which book<sub>i</sub> do you think [<sub>CP</sub> t'<sub>i</sub> [<sub>C</sub> that [John bought t<sub>i</sub>]]]

(15) v [<sub>VP</sub> think [<sub>?</sub> which book [<sub>CP</sub> that [John bought t<sub>i</sub>]]]]

Chomsky assumes that successive-cyclic movement, i.e. intermediate steps of movement, do not involve feature sharing, which essentially follows Bošković (1997, 2002, 2007, 2008a).<sup>9</sup> This means that there is no feature sharing between the declarative complementizer *that* and the wh-phrase that passes through its edge in (14). As a result, labeling through feature sharing is not an option here. The embedded clause then cannot be labeled at the point of movement of *which book* to its edge, as indicated in (15) by using ?-notation. When *v* is merged, *which book* moves away. The element merged with the CP now being a trace, it is ignored for the purpose of labeling, hence ? is labeled as CP after movement of *which book*. Only at this point the status of t'<sub>i</sub> in (14) can be determined as the Spec of CP. However, prior to the movement (see (15)), ? is not a CP, it is simply undetermined regarding the issue in question.

The crucial ingredients of Chomsky's (2013) approach to labeling and (successive-cyclic) movement are then the following: When a constituent is built by a move step that involves agreement/checks features, that constituent can be labeled. When it is built by a move step that does not check features/involve agreement, it does not receive a label, though it may receive a label at a later point after one of its immediate subconstituents moves away. Furthermore, successive-cyclic movement does not involve feature-checking/agreement in intermediate positions. (Labeling is then the driving force of successive-cyclic movement for Chomsky 2013, i.e. the need to label is what forces movement from intermediate positions, with the movement continuing until a feature-sharing position is reached.)

## 2.2. Deducing the ban on movement out of moved elements

---

<sup>8</sup>Like Chomsky (2013), I will continue using CP and SpecCP for such cases for ease of exposition.

<sup>9</sup>Bošković's (2007, 2008a) argues that intermediate wh-movement steps do not involve agreement/feature-checking, only the final step of wh-movement does; see these works for arguments to this effect. (Bošković 2008a argues that cases that have been assumed to involve morphological reflexes of such agreement with intermediate Cs actually do not involve successive-cyclic movement via SpecCPs, see here footnote 27).

(14)-(15) illustrate how successive-cyclic movement is quite generally treated in the labeling framework. Significantly, this treatment of successive-cyclic movement, in conjunction with (12), deduces the generalization in (1).<sup>10</sup>

Consider (16a), which involves movement of YP out of a moved element, XP. Before any movement takes place, XP and YP are in the configuration in (16b).

- (16) a.  $YP_i [XP \dots t_i \dots]_j \dots t_j$   
b.  $[XP \dots YP \dots]$

Since only phases can move (see (12)), for XP to be able to move in (16) XP must be a phase. Furthermore, given the PIC, any movement out of XP itself has to proceed successive-cyclically via the edge of XP, i.e. for YP to move out of XP in (16b), YP first has to move to the edge of XP. Movement of YP to the edge of XP in fact has to precede the movement of XP itself given the cycle. Consider then the movement of YP to the edge of XP, an instance of successive-cyclic movement. The merger of YP and XP results in an unlabeled element, as is generally the case with successive-cyclic movement, as discussed above. For Chomsky, phases are CPs, vPs, and DPs (I am ignoring other proposals in the literature regarding what counts as a phase since they do not affect the current discussion; (12) in fact most naturally fits with Bošković's (2014) phasal system, discussed below). But the result of merger of YP and XP is none of these; it in fact does not have a label at all, hence it does not count as a phase (in other words, phases require label-determination (see Bošković 2016b), hence unlabeled objects cannot be phases). The element formed by the merger of XP and YP is then not allowed to move, given (12).

To take a concrete case, consider movement out of subjects:

- (17) ?\*I wonder  $who_i$  [ $friends\ of\ t_i$ ] hired Mary.

Since subjects are phases (likely only DPs), whatever moves out of a subject must first move to its edge. Given the cycle, this needs to happen before the subject moves from its base-position in vP. As discussed above, merger of *who* and DP in (18), the abstract structure of the relevant part of

---

<sup>10</sup>It is worth noting here that Bošković (2015, 2016b) provides a labeling-based deduction of a number of locality effects (where the crucial component of most of the deductions is that a constituent formed by a step of successive-cyclic movement is not labeled when it is created), including a generalized version of the Complex NP Constraint, which extends to all complements of all lexical heads (movement being banned from complements of lexical heads), CED effects, Richards's (2001) tucking in effect, the full range of Comp-trace effects (in declarative, relative, and extraposed clauses), and the effect that *wh*-movement has on agreement in languages like Kinande. In this respect, the current paper, which focuses on the ban on movement out of moved elements, can be considered to provide another piece to this overall picture, the ultimate goal being to provide a labeling-based account of all locality-of-movement effects.



(17), yields an unlabeled element, which, not having a label, is not a phase. The italicized phrase marked with ? in (18) then cannot undergo movement, given (12).<sup>11</sup>

(18) [<sub>IP</sub> I ... [<sub>? who<sub>i</sub></sub> [<sub>DP subject (friends of t<sub>i</sub>)</sub>]] [<sub>vP</sub> v [<sub>vP</sub> ...]]]

The account extends to all the examples involving movement out of moved elements that were discussed in section 1.<sup>12</sup> To illustrate this with one more example, in (8a), the wh-phrase *whose books* moves to the edge of the object while the object is still in situ, delabeling it and preventing it from undergoing movement. The relevant part of the structure for the example in (8a) is given in (19).<sup>13,14</sup>

---

<sup>11</sup>Note I assume with Collins (1994) that his chain interleaving is ruled out independently of our concerns. While I leave open how chain interleaving in general should be handled, I note that the chain interleaving derivation of (17), where while the subject is still in its base position *who* moves from the edge of the subject to the edge of vP (merging with the object formed by the merger of the subject and vP), which is followed by subject movement to SpecIP and then movement of the wh-phrase to SpecCP, is indeed ruled out independently. Bošković (2016a) shows that in multiple edge configurations, the lower edge can move only after the higher edge moves. The subject can then move to SpecIP only after the wh-phrase moves to SpecCP, which violates the cycle. There are other chain interleaving derivations I will not go into below since the article focuses on movement out of moved elements. (Some such derivations involve subextraction of YP from XP followed by movement of XP to a lower position than YP, which I assume is disallowed. (Most such cases involve movement of YP and XP to the Specs of the same head (with XP tucking in), which can be blocked under Collins's 1994 notion of economy of derivation by the derivation where movement of XP alone takes both elements to the edge of the relevant head. Some derivations of this sort are also ruled out if with heads that have both A and A'-Specs the former must be created before the latter (see Abels 2007); subextraction from an object undergoing object shift can then only follow object shift.) I will put these concerns aside below, focusing on movement-out-of-moved-elements derivations.

<sup>12</sup>On the phasehood of PPs, which is relevant to (10), see Bošković (2013a, 2014) and the discussion below.

<sup>13</sup>I am focusing on the movement-out-of-a-moved-element derivation. There are other derivations that are ruled out independently, like the chain interleaving derivation where the wh-phrase moves from the edge of the object to the edge of vP, followed by the object tucking-in under the wh-phrase at the edge of vP (see Richards 2001 on tucking in). Since, as shown in Bošković (2016a) and noted in footnote 11, in multiple edge configurations the lower edge can move only after the higher edge moves, the object can undergo topicalization only after the wh-phrase moves to SpecCP, which violates the cycle. There are other problems with this derivation (see footnote 11) as well as other independent issues I am glossing over here. E.g. any derivation of (8b) where *whose book* moves into the embedded clause SpecCP, a criterial position, would freeze it in that position due to the criterial freezing effect (see Rizzi 2006 and section 4). At any rate, I will focus strictly on the movement-out-of-a-moved-element derivation below, ignoring other derivations.

<sup>14</sup>Interestingly, under Saito's (2016) approach to labeling in Japanese, the above account predicts (1) can be violated with scrambling in Japanese. Scrambling out of scrambled elements is indeed allowed in Japanese, as noted in footnote 6 and shown by (i). Saito argues that due to the lack of agreement, labeling in Japanese proceeds differently from the feature-sharing languages discussed in Chomsky (2013). According to Saito, due to the lack of agreement Japanese lacks feature sharing. The way labeling is accomplished in Japanese when two phrases merge is that certain inflectional elements, in particular Case-markers in the case of NPs/DPs, serve as antilabeling devices, making the relevant element invisible for labeling (Saito accounts for a number of properties of Japanese in these terms). Consider then (i). Under Saito's analysis, when *sono*

(19) ... [<sub>VP</sub> reads [<sub>? whose books<sub>i</sub></sub> [<sub>DP</sub> reviews of t<sub>i</sub>]]]

### 2.3. Remnant movement

We have seen in the previous section that the traditional ban on movement out of moved elements falls out rather straightforwardly from the phasal/labeling system. A question now arises regarding remnant movement: does the analysis given above block traditional remnant movement in general? In fact, it does not. With remnant movement, movement of YP out of XP in (16b) takes place while XP is still located in situ; XP is then free to move after YP moves.

Consider for example remnant vP fronting (see Huang 1993 for evidence that the subject starts within the fronted vP in (20)).

(20) [<sub>VP</sub> t<sub>i</sub> kiss Mary]<sub>j</sub> [<sub>IP</sub> Jane<sub>i</sub> did t<sub>j</sub>]

As discussed in Chomsky (2013), the result of the merger of the subject and vP in (20) cannot be labeled (cf. (21a)). The subject moves to SpecIP; since its trace is ignored for the purpose of labeling, the relevant element is labeled as vP (21b). Since vP is a phase it is allowed to move, as in (20).

(21) a. [<sub>? Jane</sub> [<sub>vP</sub> kiss Mary]]

b. [<sub>IP</sub> Jane<sub>i</sub> [<sub>vP</sub> t<sub>i</sub> kiss Mary]]

The system thus makes a difference between cases like (17) and cases like (20), the crucial difference being that in the latter case, XP moves after YP moves out of it, while in the former case XP moves before YP moves out of it. This difference has an effect on the labeling of XP, which is responsible for the contrast in question.

### 3. Extensions and exceptions to the ban on movement out of moved elements

---

*hon-o* moves to the edge of the most embedded clause (CP in bold), no labeling problem arises despite the lack of feature-sharing since the Case-marker serves to make *sono hon-o* invisible for the labeling algorithm. Successive-cyclic movement then does not delabel its target here; as a result, the bolded CP, which is targeted by successive-cyclic movement, can still move. Incorporating Saito's analysis of Japanese into the current account of (1) thus captures the exceptional status of (i) with respect to (1).

(i) [Sono hon-o<sub>1</sub> [**John-ga** [<sub>CP</sub>[<sub>IP</sub>[<sub>CP</sub> t<sub>1</sub> [<sub>IP</sub> Mary-ga t<sub>1</sub> katta to]]<sub>2</sub> [<sub>IP</sub> Bill-ga t<sub>2</sub> itta]] to] omotteiru]].  
 that book-ACC John-NOM Mary-NOM bought that Bill-NOM said that think  
 'That book<sub>1</sub>, John thinks that [that Mary bought t<sub>1</sub>]<sub>2</sub>, Bill said t<sub>2</sub>.' (Bošković and Takahashi 1998:357)

The deduction of the ban on movement out of moved elements proposed in section 2, which did not introduce any new mechanisms but simply relied on independently made existing proposals regarding phases and labeling,<sup>15</sup> provided a new perspective on the ban on movement out of moved elements. Under the analysis from section 2.2., the problem with movement of YP out of moved element XP does not arise at the point of movement of YP out of XP (as in the previous accounts of the ban in question); the problem arises already with the movement of XP, i.e. XP itself cannot undergo movement in this case—any later movement out of XP is then trivially blocked. In other words, it is not that movement of XP freezes its internal structure; rather, movement of YP to the edge of XP (for successive-cyclicity reasons, as discussed below) prevents movement of XP.

All the cases given above to illustrate (1) involve successive-cyclic movement of YP via the edge of XP (i.e. SpecXP). As a result, they also involve movement of the Spec itself since it is the very nature of successive-cyclic movement that YP undergoing it cannot stay in an intermediate Spec for independent reasons. This is the reason why they involve movement out of a moved element. This movement has masked the real reason for the ill-formedness of the relevant cases, leading to the ‘illusion’ that this later movement is responsible for it.

Since under the current analysis movement out of a moved element is incidental in the relevant cases, the violation taking place before such movement occurs, the proposed analysis also extends to cases where movement out of a moved element does not take place. One such case involves the otherwise puzzling immobility of V-2 clauses in German. As Webelhuth (1992) notes (see also Reis 1997, Wurmbrand 2014, Holmberg 2015), V-2 clauses in German cannot undergo movement. Thus, a V-2 clause moves to SpecIP in (22a) and to SpecCP in (22b). Both examples are unacceptable, in contrast to (22c), where the V-2 clause stays in situ.

- (22) a. \*weil [<sub>CP</sub> den Peter mag niemand] allgemein bekannt ist.  
 since the.ACC Peter likes nobody.NOM commonly known is  
 ‘since nobody likes Peter is commonly known’ (Wurmbrand 2014:155)
- b. \*[Er<sub>i</sub> sei unheimlich beliebt], möchte jeder<sub>i</sub> gern glauben.  
 he is.SUBJ immensely popular would.like everyone like believe  
 ‘Everyone would like to believe he is immensely popular.’ (Wurmbrand 2014:155)
- c. Sie sagte den Peter mag niemand.  
 she said the.ACC Peter likes nobody.NOM  
 ‘She said nobody likes Peter.’ (Wurmbrand 2014:153)

---

<sup>15</sup>Of course, one can question the assumptions in question. Comprehensively examining the motivation for these assumptions is beyond the scope of this work, whose scope is more modest: to point out that the assumptions in question deduce (1) for the vast majority of the relevant cases, which was done in section 2.2, and to explore whether the assumptions would allow for any legitimate violations of (1), which will be done in this section.

V-2 clauses are notorious for their non-pickiness in that anything can fill their SpecCP. This has led to proposals that such clauses do not involve agreement at all—they involve EPP without Agree (see Haegeman 1996, Joutteau 2008, Roberts 2004, Roberts and Roussou 2002, among others). Since feature-sharing is tied to agreement, the most natural interpretation of this is that V-2 clauses do not involve feature-sharing, which in turn means that they are not labeled (see in fact Blümel in press). But that gives us an immediate account of their immobility given that, as discussed above, unlabeled elements cannot undergo movement. Under accounts like Roberts (2004), the V-2 movement to SpecCP is treated essentially like successive-cyclic movement in Chomsky (2013): neither involves an agreement relation. Under the current analysis, phrases with non-agreeing Specs cannot undergo movement, since a non-agreeing Spec delabels the relevant phrase, making it impossible for it to move. It is then not surprising that, just like phases that host successive-cyclic movement, V-2 clauses cannot undergo movement.<sup>16</sup>

Returning now to the cases which do involve movement out of a moved element, in all the cases of (1) discussed above, YP moves to the edge of XP (this was in fact the reason why XP could not undergo movement). What would happen if YP is base-generated at the edge of XP? Finding such cases, where we can be sure that YP is base-generated at the edge of XP, is not easy. Before attempting to find such cases, consider what we may expect to find with respect to such cases in the current system. If YP is base-generated at the edge of XP, and YP is otherwise able to stay at the edge of XP, this means that the result of merger of YP and XP can be labeled. Assuming both YP and XP to be phrases, it follows then that YP and XP undergo feature sharing. This crucially affects the timing of labeling that is relevant to the account of (1) proposed above.

In the cases we have discussed so far (which involve successive-cyclic movement), labeling of the YP-XP merger was simply not possible (due to the lack of feature-sharing); we had to wait for YP to move away so that YP can be ignored for the purpose of labeling, which was too late for the concerns from section 2.2. The wait is not forced in the case of labeling via feature sharing. In other words, while in the case of successive-cyclic movement (i.e. the non-feature sharing case), labeling must be delayed, since it is simply not possible to label until one element moves away, with feature-sharing Spec-merger labeling is possible at the creation of the relevant structure—movement away is not required to make labeling possible in this case. The analysis presented in section 2 then makes a prediction: (1) should not hold for cases where the relevant element (i.e. an element that undergoes movement out of a moved element) is base-generated at the phasal edge and is otherwise able to stay in that position, an indication that it undergoes feature-sharing with the element it merges with in the labeling framework (for ease of exposition, I

---

<sup>16</sup>The analysis implies that some unlabeled objects can still be interpreted at the interface, which can be taken to be what is special about V-2 clauses (see, however, Bošković 2016c for an alternative account of the immobility of V-2 clauses that also unifies the immobility of V-2 clauses and (1) but where V-2 clauses are labeled). Notice also that the lack of labeling does not fully strip V-2 clauses off phasehood effects. The result of the merger of C and IP is still labeled as an instance of a head-phrase merger, which is enough to send the IP to spell-out.

will refer to such elements as base-generated Specs<sup>17</sup>). (1) should be violable in such a case, given that feature-sharing configurations result in labeling. Movement out of a moved element should then be allowed in this particular case since the labeling problem of the kind discussed in section 2.2. would not arise here because all labeling would take place before the relevant movements.<sup>18</sup>

The upshot of the above discussion is that under the analysis presented in section 2.2., unless additional assumptions are adopted (1) is not expected to hold for base-generated Specs, which undergo feature sharing. In other words, movement out of a moved element should be possible for a base-generated Spec of the moved element. However, while the prediction is clear, it is rather difficult to find clear cases of the relevant type, where we can be sure that the relevant element is base-generated at the phasal edge (we also need to make sure that the edge itself can independently move). In fact, I am not aware of any clear cases of that sort in English.

Consider for example possessors (having in mind the issue of whether possessors can move out of a moved DP). English possessors are often assumed to be base-generated in SpecDP, where they undergo agreement/feature-sharing with D.<sup>19</sup> However, a number of authors have argued that their surface position is SpecPossP (see for example Kayne 1994), PossP being dominated by DP, which means that the possessor is not located at a phasal edge, hence would need to undergo (non-feature sharing) successive-cyclic movement to SpecDP if it is to move outside of the DP. Finally, possessors simply do not move outside of their DP in English, hence (1) cannot be tested with possessor extraction in English anyway.

Serbo-Croatian (SC) possessors, however, provide a relevant case, hence can be used as a testing ground here. Consider the following contrast between English and SC, noted in Despić (2011, 2013).

---

<sup>17</sup>Note that not all base-generated Specs undergo feature sharing (however, those that do not must move). Thus, Chomsky (2013) argues that the subject in SpecvP and its sister do not undergo feature sharing in English, which then forces subject movement in English (in fact, the most natural way of capturing the situation where a Spec cannot remain in its base-generated position in the labeling framework is to assume that the configuration in question causes a labeling problem, hence it forces movement).

<sup>18</sup>Following Bošković (2015), I assume that labeling can take place as soon as it is possible (see also Rizzi 2016, Saito 2016, Shlonsky 2014, who also argue for this position), which means that with feature-sharing, labeling can take place prior to any movement of the elements that undergo feature-sharing.

The situation is slightly more complicated in Chomsky's (2013) approach to the timing of labeling, but the result is the same. Chomsky assumes that labeling takes place at the phasal level, for the whole phase. Nothing changes with respect to the prediction discussed in the text under this approach: a label for the result of a merger of a base-generated Spec of phase XP which undergoes feature sharing with the element that it merges with is determined at the phasal level of XP, hence prior to any movement of the elements in question (crucially, prior to the movement of XP).

Bošković's (2016b) proposal that the result of a head-phrase merger is labeled immediately while the result of a phrase-phrase merger is labeled as in Chomsky (2013), when the structure is sent to the interfaces, can also be accommodated if the latter is interpreted as in Chomsky (2013), with the labeling for such cases taking place at the phasal level for the whole phase.

<sup>19</sup>See, however, see Alexiadou (2005), Munn (1995), and Radford (2000), who argue that possessors are base-generated within NP and move to SpecDP from an NP-internal position.

- (23) a. His<sub>i</sub> latest movie really disappointed Kusturica<sub>i</sub>.  
 b. Kusturica<sub>i</sub>'s latest movie really disappointed him<sub>i</sub>.  
 c. \*Kusturicin<sub>i</sub> najnoviji film ga<sub>i</sub> je zaista razočarao.  
     Kusturica's latest movie him is really disappointed  
 d. \*Njegov<sub>i</sub> najnoviji film je zaista razočarao Kusturicu<sub>i</sub>.  
     his latest movie is really disappointed Kusturica

Under the assumption that traditional Specs c-command out of the phrase where they are located, Kayne (1994) takes the acceptability of (23a-b) to indicate that English possessors are not located in SpecDP, but in the Spec of a lower phrase, SpecPossP, with the DP confining the c-command domain of the possessor. Despić (2011, 2013) observes that in SC, a language without articles which has been argued by a number of authors to lack DP (for example Corver 1992, Zlatić 1997, Trenkić 2004, Bošković 2005, 2008c, 2012, 2014, Marelj 2008, 2011, Despić 2011, 2013, Runić 2014a,b, Takahashi 2012, Talić 2014, 2015), possessors do c-command out, as indicated by the binding violations in (23c-d), which contrast with English (23a-b). Despić takes the contrast in question as indicating that DP is missing in SC, with the possessor located in the highest projection of the traditional NP (TNP).<sup>20</sup> Since possessors can stay in that position, they must be undergoing feature-sharing labeling in that position—they in fact overtly agree in phi-features and case with the noun.<sup>21</sup> (Note that following Bošković 2008c, 2012, Despić 2013 argues that the traditional NP is a bare NP in such cases in SC, hence the possessor is located at the edge of the TNP.) Furthermore, possessors in principle can undergo movement in SC, as shown by (24).<sup>22</sup> Moreover, Bošković (2013a, 2014) argues that the highest projection in the extended domain of a noun (or any lexical category) functions as a phase, which makes NP a phase in SC due to the lack of DP;<sup>23</sup> the reader is referred to Bošković 2013a, 2014 for a number of arguments to this effect.

- (24) Jovanovu<sub>i</sub> je on vidio [<sub>NP</sub> t<sub>i</sub> sliku]  
 John's.acc.fem.sg is he seen picture.acc.fem.sg  
 'He saw John's picture.'

<sup>20</sup>The term TNP is used neutrally here, for whatever the categorial status of the relevant element is.

<sup>21</sup>They thus differ from adnominal genitive complements. While the possessors in question precede the noun and agree with it in case and phi-features, nominal complements follow the noun and are assigned genitive case by the noun—they do not agree with the noun in either case or phi-features.

<sup>22</sup>It should be noted that there are accounts of possessor-fronting in terms of remnant movement (Abels 2003, Franks and Progovac 1994) and scattered deletion (Fanselow and Čavar 2002). They both, however, face rather serious problems (see Bošković 2005, 2013a, Stjepanović 2010, 2011, Talić 2014, Despić 2015, among others; note also that possessor extraction in SC is island sensitive).

<sup>23</sup>PossP would be a phase if it is present. What is important here is that the possessor is located at the edge of the highest projection of the TNP in SC and that that projection is a phase, both of which have been extensively independently argued for.

We thus have here everything we need to test whether (1) holds for extraction of base-generated Specs. In (24), the phrase from which the possessor is extracted could be located in the base position. We need an example where this is clearly not the case. In fact, possessor extraction is possible in such cases too. In (25a), the possessor is extracted out of a fronted object, and in (25b) it is extracted out of a subject of a passive construction which nevertheless precedes the verb. Both of these cases involve movement out of a moved element. Another case is given in (25c), where the subject precedes a sentential adverb, indicating movement to SpecIP prior to possessor extraction. (For ease of exposition, I only indicate case agreement below.)

- (25) a. Jovanovu<sub>i</sub> je on [<sub>NP</sub> t<sub>i</sub> sliku]<sub>j</sub> vidio t<sub>j</sub>  
 John's<sub>acc</sub> is he picture<sub>acc</sub> seen  
 'He saw John's picture.'
- b. Jovanova<sub>i</sub> je [<sub>NP</sub> t<sub>i</sub> slika]<sub>j</sub> ukradena t<sub>j</sub>  
 John's<sub>nom</sub> is picture<sub>nom</sub> stolen  
 'John's picture was stolen.'
- c. Jovanov<sub>i</sub> je [<sub>NP</sub> t<sub>i</sub> prijatelj]<sub>j</sub> vjerovatno t<sub>j</sub> otpustio Mariju.  
 John's<sub>nom</sub> is friend<sub>nom</sub> probably fired Maria<sub>acc</sub>  
 'John's friend probably fired Maria.'

The above discussion indicates that (1) can be violated (i.e. it does not hold) if the element undergoing the movement that tests (1) is base-generated at the edge of the relevant phrase. As discussed above, this is exactly what is expected under the current account of (1) since labeling via feature-sharing resolves the problem that arose with respect to labeling with the cases discussed in section 2.2., given that labeling here takes place before the relevant movement occurs.

Consider the full derivation of (25a) from this perspective (under the assumptions discussed above). The possessor is base-generated at the TNP-edge, where it undergoes feature-sharing so that the TNP in question is labeled (26a). The TNP in question is a phase under Bošković's (2014) approach to phases, hence it can undergo movement, as in (26b), without violating (12). After the object moves to the preverbal position, the possessor undergoes extraction (26c).<sup>24</sup>

<sup>24</sup>The point made here regarding possessor extraction can also be made regarding AP left-branch extraction in SC (cf. (29)), given that APs are also base-generated at the TNP edge in SC (see Bošković 2012, 2013a).

What about extraction of genitive nominal complements, which are not generated at the NP-edge? An issue here is that extraction of such complements is in general somewhat degraded in SC, as in (ia) (see Bošković 2014, Zlatić 1994; Bošković argues that the reason why such constructions are degraded in SC is that they must involve movement from the complement to the Spec of NP (NP being a phase in SC), which is disallowed (see Abels 2003)). Such extraction does, however, get even worse when the remnant is fronted, as in (ib). This is in contrast to the case of agreeing possessors, where most speakers actually prefer constructions where the remnant is fronted.

- (i) a. ??Kojeg doktora<sub>i</sub> si ti vidio [prijatelja t<sub>i</sub>]  
 which doctor<sub>GEN</sub> are you seen friend<sub>ACC</sub>

- (26) a. vidio [<sub>NP</sub>Jovanovu sliku]  
       seen     John's.acc picture.acc  
       b. [<sub>NP</sub>Jovanovu sliku]<sub>j</sub> vidio t<sub>j</sub>  
       c. Jovanovu<sub>i</sub> je on [<sub>NP</sub>t<sub>i</sub> sliku]<sub>j</sub> vidio t<sub>j</sub>

What is important for us is that while (25a) violates (1), it still conforms with the deduction of (1) proposed in section 2.2. (more precisely, what was deduced in section 2.2. is actually a modified version of (1); (25a) conforms with this modified version of (1) that was deduced above although it violates (1) itself). Notice also that, as expected given the above discussion, the TNP with the possessor remaining in its Spec can also move.

- (27) [Jovanovu sliku]<sub>j</sub>        je on vidio t<sub>j</sub>  
       John's.acc picture.acc is he seen

Another relevant case involves attributive adjectives, given that, as argued in Bošković (2013a, 2014), adjectives project phasal domains. (More precisely, Bošković 2013a, 2014 argues that the highest projection in the extended domain of an adjective is a phase; I will use the term traditional AP (TAP) to refer to AP and any functional projections in the extended domain of AP; the highest projection in the TAP functions as a phase in Bošković's 2014 system.) What is important for our purposes is that intensifier extraction from APs is possible in SC, as discussed in Talić (2015) and illustrated by (28).

- (28) ?Izuzetno<sub>i</sub> su kupili [t<sub>i</sub> skup]        automobil.  
       extremely are bought expensive car  
       'They bought an extremely expensive car.'

Such extraction is not possible in English—the English counterpart of (28) is unacceptable. Independently of our concerns, Talić (2015) argues that the difference between languages like SC, which allow such extraction, and languages like English, which disallow it, is that the intensifier is base-generated at the edge of the TAP phase in SC, while it is base-generated in a lower position in English, and has to undergo successive-cyclic movement to the edge of the TAP phase if it is to move out of it, given the PIC. Talić provides an analysis where this movement leads to a violation.<sup>25</sup> Under Talić's analysis, the SC construction in question then provides another test case,

---

'Which doctor did you see a friend of?'

- b. \*Kojeg doktora si ti prijatelja vidio?

<sup>25</sup>More precisely, an antilocality violation (see Talić 2015 for details of the analysis). Talić actually argues that the intensifier is generated in the same position in both English and SC, but the TAP has a functional projection above the base-generated position of the intensifier in English, but not in SC. (More generally, Talić argues that just like the structure of the TNP is richer in English than in SC, the structure of the TAP



given that, in contrast to English, in SC the intensifier is base-generated at the edge of the TAP phase (since it can stay in this position it must be able to undergo feature-sharing).

Now, in contrast to English, SC allows left-branch extraction of APs (see for example Corver 1992, Bošković 2005, 2012).

(29) Skup<sub>i</sub> su kupili [t<sub>i</sub> automobil].  
expensive are bought car  
'They bought an expensive car.'

Crucially, intensifier extraction is possible out of APs that undergo movement. Thus, in (30), the AP itself has moved out of its TNP, with the intensifier moving out of the moved AP.

(30) ?Izuzetno<sub>i</sub> su [t<sub>i</sub> skup]<sub>j</sub> kupili [t<sub>j</sub> automobil].  
extremely are expensive bought car  
'They bought an extremely expensive car.'

This is then another instance of movement out of a moved element that is predicted to be acceptable under the current account of (1).

#### 4. Restating (1)

If correct, the above discussion indicates that the generalization in (1) is fundamentally misguided. The right generalization is in fact (31), which we have seen above can be deduced from independent assumptions, i.e. it is a theorem.<sup>26</sup>

(31) Phases that host successive-cyclic movement (at their edge) cannot undergo movement.

There is nothing that is in principle wrong with movement out of moved elements; what was wrong in the relevant cases which were used in the literature to motivate positing (1) was that the element that was later moved out of could not undergo movement itself. A phase with an agreeing Spec (see footnote 26) can undergo movement, but a phase with a non-agreeing Spec (which is the

---

is richer in English than in SC, the same factor being responsible for both differences. This enables Talić to provide a unified account of the SC/English contrast regarding constructions like (28) and the SC/English contrast regarding AP left-branch constructions like (29), discussed below.) As a result, the intensifier is not base-generated at the phasal TAP edge in English, while it is in SC, which is what is important for our purposes. (Talić's account of the SC/English contrast regarding constructions like (28) (which she extends to AP left-branch constructions like (29)) may actually also be extendable to the SC/English contrast regarding constructions like (47) below, which are also unacceptable in English.)

<sup>26</sup>As discussed above, the issue here is that the relevant phrases are actually not phases; for ease of exposition I ignore this point here. (Note also that (also for ease of exposition) in the following discussion I will interchangeably use the terms feature-sharing and agreeing.)

case with successive-cyclic movement) cannot. Since non-agreeing Specs cannot stay where they are for independent reasons (i.e. that's the very nature of successive-cyclic movement), all the cases of the latter type also involve movement of the Spec itself, which means that they involve movement out of a moved element. This has led to the "illusion" that this later movement is what is responsible for the ungrammaticality of the relevant constructions, which this article has argued is not the case. That this later movement is indeed accidental was confirmed by the extension of the proposed account of (31) to the immobility of V-2 clauses, where movement out of a moved element does not even take place. In fact, taking the extension to the immobility of V-2 clauses into consideration, (31) can be restated as in (32).

(32) Phases with non-agreeing Specifiers cannot undergo movement.

(32) in turn can be restated as in (33) within the labeling framework.

(33) Unlabeled elements cannot undergo movement.

The analysis proposed in this article, which took the traditional ban on movement out of moved elements (i.e. (1)) as the point of departure, in fact deduced (32)-(33), rather than (1).

In principle, as long as nothing else interferes, it should then not be too difficult to find acceptable cases of movement out of moved elements. In fact, it appears that we do not need to confine our attention to base-generated Specs, as in the discussion in section 3. Even elements that move to a feature-sharing position could in principle provide relevant cases: an agreeing Spec of XP (even if it is created by movement) should be able to move out of XP after XP undergoes movement. The problem is that in almost all relevant cases something else interferes, in particular, the criterial freezing effect discussed in a number of works (see for example Epstein 1992, Rizzi 2006, Bošković 2008b).<sup>27</sup>

---

<sup>27</sup>Some languages have often been assumed to involve morphologically-manifested agreement with successive-cyclic movement out of declarative CPs (i.e. in intermediate SpecCPs). However, such languages have also been quite convincingly argued to involve very different derivations in the relevant cases, which is not surprising under the labeling approach to successive-cyclic movement, where the impossibility of labeling essentially drives such movement. Most such languages do not actually involve agreement between a wh-phrase and an intermediate C. Rather, what happens is that a wh-phrase that moves out of a clause disrupts object agreement between the higher verb and the clause. Thus, in Selayarese, one of the standard cases of putative intermediate wh-agreement languages, there is actually no wh-C agreement. Rather, object agreement that normally happens between a higher verb and its clausal complement is blocked when a wh-phrase moves out of the clausal complement. Bošković (2008a) in fact analyzes this situation in terms of (1): Agreeing clauses undergo object shift. A wh-phrase cannot move out of an agreeing clause since such movement would involve movement out of a moved element. Bošković also suggests a similar account of the Irish case; however, Noonan (1999) argues that such cases in fact involve an even more different derivation, with what was considered to be an agreeing C actually being an object shift marker. As discussed in Bošković (2008a), Kinande may be the most uncontroversial case of a language with true intermediate wh-agreement, since in this language wh-phrases can belong to a number

Consider in this respect French (34). Here, the wh-phrase moves to the SpecCP of the clause embedded under *demandé* ‘ask’. This clause itself then undergoes movement, which is followed by movement of the wh-phrase out of the CP in question.

- (34) \*Où<sub>i</sub> Anne a dit que [<sub>CP</sub> t<sub>i</sub> [<sub>IP</sub> Pierre a embrassé Marie t<sub>j</sub>]]; Jean a demandé t<sub>j</sub>  
 where Anne has said that Pierre has kissed Marie Jean has asked  
 'Anne said that Jean asked where Pierre kissed Marie.'

(34) thus involves movement out of a moved element, the interrogative CP. The interrogative CP itself can move here, as indicated by (35a-b), which are clearly better than (34).

- (35) a. [<sub>CP</sub> Où<sub>j</sub> [<sub>IP</sub> Pierre a embrassé Marie t<sub>j</sub>]]<sub>i</sub>, Jean a demandé t<sub>i</sub>.  
 where Pierre has kissed Marie Jean has asked  
 'Jean asked where Pierre kissed Marie.'  
 b. ?Anne a dit qu' [<sub>CP</sub> où<sub>j</sub> [<sub>IP</sub> Pierre a embrassé Marie t<sub>j</sub>]]<sub>i</sub>, Jean a demandé t<sub>i</sub>.  
 Anne has said that where Pierre has kissed Marie Jean has asked

Is then (34) an instance of (1) where there is nothing wrong with the movement of the element that is later to be moved out of (namely, the most deeply embedded interrogative clause), as indicated by (35), which would be unexpected under the current analysis? The answer is no, since even if the CP in question itself does not move, wh-movement out of it is impossible, as shown by (36).

- (36) \*Où<sub>i</sub> Anne a dit que Jean a demandé [<sub>CP</sub> t<sub>i</sub> [<sub>IP</sub> Pierre a embrassé Marie t<sub>j</sub>]] ?  
 where Anne has said that Jean has asked Pierre has kissed Marie  
 'Anne said that Jean asked where Pierre kissed Marie.'

(36) shows that (1) is irrelevant to the ungrammaticality of (34). The wh-phrase cannot move out of the interrogative CP in question regardless of whether this CP undergoes movement or not. Of course, what we are dealing with here is what Rizzi (2006) referred to as the criterial freezing

---

of different classes, which is reflected in the morphological make up of the complementizers (both final and intermediate complementizers). This rules out the possibility of an account in terms of object agreement (cf. the case of Selayarese). However, as discussed in Boeckx (2003), Bošković (2008a), den Dikken (2009), and Schneider-Zioga (2009), the relevant cases in Kinande do not involve movement at all: the fronted wh-phrases are blocked from reconstructing into lower positions and they are also island-insensitive (they essentially involve resumptivization). In light of this, I will not discuss such cases here. (Space considerations prevent a discussion of a number of potentially relevant cases. The cases discussed in the text should, however, indicate what we may expect to find, i.e. how the potentially relevant cases not discussed here should be analyzed. Thus, if, more generally, there are cases that involve feature sharing with true successive-cyclic movement (see here van Urk 2015), the expectation would be that the freezing effect discussed in this paper would not hold in such cases; one potentially relevant case, which involves quantifier float, is discussed below.

effect (see also Epstein 1992, Bošković 2008b). An interrogative SpecCP is a position from which further movement is not possible, i.e. Q/wh-feature sharing has a freezing effect on movement (once *où* moves to the Spec of the most embedded CP, which is an interrogative SpecCP, it cannot undergo further movement). While the current account of (1), which actually restates it as (31)/(32), predicts that feature-sharing Specs can in principle move out of moved elements, the problem is that most feature-sharing Specs are actually criterial Specs, hence banned from undergoing movement for independent reasons (whether they move from a moved element, or an element located in its base-generated position). This is in fact the reason for the ungrammaticality of (34).

Luis Vicente (p.c.), however, brings up a case that is similar to (34) but where the criterial freezing effect is not involved. It concerns German and Dutch PPs with *r*-pronouns, like the ones in (39) (I illustrate the relevant point with respect to German, but the discussion extends to Dutch). *R*-pronouns are exceptional in that they must precede the preposition, although German adpositions are otherwise always prepositional. Compare in this respect (37) and (38).

(37) a. *davon/damit*

it.of/it.with

b. \**von da/\*mit da*

(38) a. *von/mit dem Mann*

of/with the man

b. \**dem Mann von/mit*

Focusing on *davon*, *davon* is standardly analyzed as involving movement of *da* to SpecPP (or a higher position in the extended projection of the preposition; I will refer to the former below for ease of exposition). Since *da* can stay in that position, and is in fact located in that position when the PP is moved, as in (39), it must be the case that it undergoes feature-sharing with its sister, which makes labeling possible.

(39) Er hat *davon*<sub>i</sub> noch nicht [das Vorwort *t*<sub>i</sub>] gelesen.

he has it-of yet not the preface read (den Besten and Webelhuth 1990:90)

Notice that the DP P order is highly restricted in German; it is restricted to the small group of *r*-pronouns and about twenty prepositions. This in itself can be taken to suggest that agreement/feature-sharing is involved here—only elements that undergo the relevant agreement/feature-sharing occur in this configuration (following van Riemsdijk 1997, I will refer to the feature in question as R-feature (see van Riemsdijk 1997 for some discussion of the nature of this feature)). At any rate, what is important for our purposes is that the fact that *da* must move to SpecPP (cf. (37b)) and stays in SpecPP (cf. (37a), (39)) provides evidence that movement of *da* to SpecPP does not take place strictly for reasons of successive-cyclicity, i.e. *da* moves to the position in question independently of successive-cyclicity.

Now, *da* can also move alone, stranding the preposition, as in (40).<sup>28</sup> Furthermore, as pointed out by Luis Vicente, it is possible to combine these two movements, by first moving the whole PP and then moving *da* out of it, as in (41). (The DP [*das Vorwort t<sub>j</sub>*] undergoes remnant movement, which is in accordance with the approach to remnant movement from section 2.3.; see also Thiersch in press for discussion of such examples.)<sup>29</sup>

(40) Er hat da<sub>i</sub> noch nicht [das Vorwort [t<sub>i</sub> von t<sub>i</sub>]] gelesen.  
 he has it yet not the preface read  
 (den Besten and Webelhuth 1990:90)

(41) Er hat da<sub>i</sub> [das Vorwort t<sub>j</sub>]<sub>k</sub> noch nicht [t<sub>i</sub> von t<sub>i</sub>]<sub>j</sub> t<sub>k</sub> gelesen.  
 he has it the preface yet not of read  
 (den Besten and Webelhuth 1990:90)

The same point is illustrated for Dutch by (42), which does not involve remnant movement. (*Waar* in (42a) is an *r*-pronoun, which, when not moved out of the PP, must precede the preposition, in contrast to the DP in (42b)—without P-stranding what would be wh-moved in (42a) is *waar mee*.) The PP in (42a) moves out of the embedded clause, and then *waar* moves out of this PP.

(42) a. waar<sub>i</sub> had jij dan [t<sub>i</sub> mee t<sub>i</sub>]<sub>j</sub> gedacht dat je de vis t<sub>j</sub> zou moeten snijden?  
 where had you then with thought that you the fish would must cut  
 ‘What did you think you should cut the fish with?’  
 b. cf. ?ik had met een scheermes gedacht dat je de vis zou moeten snijden  
 I had with a razor thought that you the fish would must cut  
 (Barbiers 2002:49)

Under the above analysis, (41) and (42a) are the same kind of a case as SC (25), except that they do not involve a base-generated Spec, but movement to the relevant Spec position: *da* in (41) moves to the Spec of *von*, the whole PP then moves out of the DP, with *da* moving out of the PP. In Dutch (42a), *waar* moves to the Spec of *mee*, the PP then moves to the matrix clause, followed by wh-movement of *waar* out of the PP. As noted above, that the moving elements, *da* and *waar*, otherwise remain in the relevant Spec position indicates that they can undergo feature-sharing needed for labeling in that position, hence no labeling problem of the kind discussed in section

<sup>28</sup>There are ill-understood restrictions on P-stranding in German that will not be discussed here, see Thiersch (in press) and references therein.

<sup>29</sup>Another relevant example is given in (i), where *da* moves out of a PP which has moved out of a VP that undergoes remnant fronting.

(i) [t<sub>j</sub> gerechnet]<sub>k</sub> hatte Peter da<sub>i</sub> nicht [t<sub>i</sub> mit t<sub>i</sub>]<sub>j</sub> t<sub>k</sub>.  
 counted had Peter there not with  
 ‘Peter had not expected that to happen’  
 (den Besten and Webelhuth 1990:87)

2.2. arises here.<sup>30</sup> (41)-(42a) are then another acceptable case of movement out of a moved element which is predicted to be acceptable by the account (and the reformulation) of the freezing effect in question proposed in this article.

What is important for our purposes is that in all the cases where I have argued above that (1) can be violated, the element that is able to move out of a moved element (XP) is independently able to stay at the edge of the moved element (in fact, the edge of XP is its obligatory surface position within XP). This provides evidence that labeling at the relevant edge position is possible; in other words, in the relevant cases we are not dealing with true successive-cyclic movement, where the moving element is not able to remain in the intermediate position. The account of (1) proposed in this article, which confines the effect of (1) to true successive-cyclic movement,<sup>31</sup> can capture the exceptional cases as well as the unacceptable cases that have been standardly used in the literature to illustrate the effects of (1), of the kind reviewed in section 1.

Another relevant case may be provided by floating quantifiers in Janitzio P'urhepecha (JP). This case is somewhat different from the cases discussed above in that it is not clear that the moving element can stay in the relevant edge position though there is independent evidence for feature-sharing in the relevant edge position.

Zyman (2016) shows that like several other languages, JP exhibits a pattern of quantifier float where without quantifier float the quantifier and the noun optionally agree, while under quantifier float they must agree. This is illustrated in (43)-(44) (note that *uatsapi-cha* and *iamindu-eecha* need not be adjacent in (44b).)

- |      |    |  |                    |                        |            |
|------|----|--|--------------------|------------------------|------------|
| (43) | a. | <b>Iamindu</b>                               | <b>uatsapi-cha</b> | ch'ana-xa-Ø-ti=sĩ      | juata-rhu. |
|      |    | all  | child-PL           | play-DUR-PRS-IND+3=3pS | hill-LOC   |
|      |    | 'All the kids are playing on the hill.'      |                    |                        |            |
|      |    |  |                    | (Zyman 2016:4)         |            |
|      | b. | <b>Iamindu-eecha</b>                         | <b>uatsapi-cha</b> | ch'ana-xa-Ø-ti=sĩ      | juata-rhu. |
|      |    | all-PL                                       | child-PL           | play-DUR-PRS-IND+3=3pS | hill-LOC   |
|      |    | 'All the kids are playing on the hill.'      |                    |                        |            |
|      |    |  |                    | (Zyman 2016:4)         |            |
| (44) | a. | <b>*Uatsapi-cha</b>                          | <b>iamindu</b>     | ch'ana-xa-Ø-ti=sĩ      | juata-rhu. |
|      |    | child-PL                                     | all                | play-DUR-PRS-IND+3=3pS | hill-LOC   |
|      |    | int. 'The kids are all playing on the hill.' |                    |                        |            |
|      |    |  |                    | (Zyman 2016:6)         |            |

<sup>30</sup>In contrast to wh-feature (i.e. Q) checking/sharing (see here the movement of the wh-phrase to the most embedded SpecCP in (36)), R-feature sharing does not induce a criterial freezing effect (otherwise *da/waar* would not be able to move outside of the PP, stranding the preposition).

It may be worth noting here that Van Riemsdijk (1997) suggests that the relevant PPs always undergo movement in Dutch; this would explain why P-stranding is generally restricted to *r*-pronouns (only elements that undergo feature sharing (i.e. *r*-pronouns) could then move out of PPs since such movement would always involve movement out of a moved element.

<sup>31</sup>Recall that the movement to SpecCP of V-2 clauses is abstractly similar to successive-cyclic movement, hence the extension of the current account of (1) to the immobility of V-2 clauses.

b. ?Uatsapi-cha	iamindu-eecha	ch'ana-xa-Ø-ti=sĩ	juata-rhu.
child-PL	all-PL	play-DUR-PRS-IND+3=3pS	hill-LOC
'The kids are all playing on the hill.'		(Zyman 2016:5)	

The analysis presented in this article provides a new perspective on the paradigm in (43)-(44). Bošković (2004a) shows that quantifier float of the kind discussed in Sportiche (1988) is quite generally crosslinguistically disallowed in theta-positions. This means that quantifier float necessarily involves movement of the phrase within which the quantifier is to be stranded, followed by the stranding movement (I will refer to the phrase where the quantifier is located/stranded as QP (see also Shlonsky 1991); Bošković 2013a, 2014 argues that this phrase is a phase). In other words, quantifier float necessarily involves movement out of a moved element. (44a) can then be seen as an instance of the traditional ban on movement out of moved elements, i.e. (1), while (44b) can be seen as a case where the ban is voided since the element that is undergoing movement out of a moved phrase undergoes agreement at the edge of the moved phrase. In other words, both (44a) and (44b) involve movement out of a moved QP. In (44b), the moving element undergoes agreement at the edge of QP, voiding the effect of the traditional ban on movement out of moved elements for reasons discussed above.<sup>32</sup>

## 5. On the Adjunct Condition

In this section I will discuss the Adjunct Condition, i.e. the traditional ban on extraction out of adjuncts, illustrated by (45).

(45) ?\*What<sub>i</sub> did you fall asleep [because John was reading t<sub>i</sub>]?

What this section will show is that adjuncts exhibit the same pattern of extraction as moved elements, suggesting that a unification may be in order here. Takahashi (1994) in fact attempts to

---

<sup>32</sup>I take (43) to indicate that the relevant agreement is in principle optional. The agreement option is forced in the context of quantifier float by the current account of (1). There are other languages that exhibit this kind of pattern (e.g. German and Hebrew); in fact, as far as I know, if agreement between the Q and the NP is in principle possible, it is forced under Q-floating. In principle, the above analysis could be extended to languages like English (though I leave this open here), the only difference being that the relevant agreement relation is never morphologically realized in English (in fact, agreement is rarely morphologically realized in English though it is standardly assumed to take place even when it is not morphologically realized). JP is particularly useful here since the agreement in question is morphologically manifested, but also because, as Zyman (2016) shows, JP floated quantifiers cannot be analyzed as adverbs (see Bobaljik 2003 and references therein), i.e. ZP quantifier float indeed involves Sportiche (1988)-style quantifier stranding.

It should also be noted that there are other cases where subextraction has been reported to require agreement (see e.g. Bošković 2009). The account presented here may provide a new perspective on all such cases, i.e. it may provide a general explanation for the cases exhibiting the forced-agreement-under-subextraction effect. However, establishing this would require a detailed examination of the relevant cases, which cannot be undertaken here for space reasons.

unify the Adjunct Condition (i.e. the ban on extraction out of adjuncts) with (1), though in a rather roundabout way (see also Chametzky 1996 and Hunter 2015). There may, however, be a more natural extension of (1) to the Adjunct Condition. It turns out that extraction out of adjuncts is allowed exactly in the context where extraction out of moved elements is allowed, which argues for a unified account of the two. In particular, the most straightforward interpretation of this state of affairs seems to be that adjuncts undergo movement, in which case extraction out of an adjunct involves extraction out of a moved element (see below for an implementation of this suggestion).<sup>33</sup>

Recall that the ban on movement out of moved elements is voided with base-generated Specs. The same in fact holds for adjuncts—the ban on extraction out of adjuncts is voided for elements that are base-generated at the adjunct edge. Thus, *koliko/izuzetno* are plausibly base-generated at the edge of the adjunct in SC (46). Importantly, they are allowed to move out of it.<sup>34</sup>

- (46) *Koliko/Izuzetno<sub>i</sub> je on [t<sub>i</sub> visoko] skočio*  
 how extremely is he high jumped  
 ‘How high did he jump?/He jumped extremely high.’

Another case which can be handled in the same way is given below.

- (47) *Izuzetno<sub>i</sub> se on [t<sub>i</sub> loše] ponašao?*  
 extremely is he badly behaved  
 ‘He behaved extremely badly.’

---

<sup>33</sup>See also Bošković (in press) for an extension of the current account of (1) to the islandhood of inherently Case-marked elements, noted in Starke (2001) and illustrated by SC (i), which involves extraction out of an inherently (i.e. dative) Case-marked object.

- (i) *?\*Kojeg doktora<sub>i</sub> si prijetio [prijatelju t<sub>i</sub>]?*  
 which doctor<sub>GEN</sub> are threatened friend<sub>DAT</sub>  
 ‘Which doctor did you threaten a friend of?’

Bošković (in press) shows that such inherently Case-marked elements exhibit the same kind of locality as moved elements: contexts that exceptionally allow extraction out of moved elements also exceptionally allow extraction out of inherently Case-marked elements, as illustrated in (ii) with SC possessor extraction.

- (ii) *Čijem<sub>i</sub> si prijetio [t<sub>i</sub> prijatelju]?*  
 whose<sub>DAT</sub> are threatened friend<sub>DAT</sub>  
 ‘Whose friend did you threaten?’

Based on that, Bošković (in press) argues that the islandhood of inherently Case-marked elements should be unified with the islandhood of moved elements, which means that inherently Case-marked elements undergo movement (this also provides motivation for Torrego’s 1998 movement of *a*-marked DPs in Spanish).

<sup>34</sup>Not surprisingly, (i) is also possible.

- (i) *[Koliko/izuzetno visoko] je on skočio*  
 how/extremely high is he jumped



Turning now to TNP adjuncts, SC is rather productive regarding the possibility of TNPs functioning as adjuncts. Such cases are important in that we can take advantage of possessor extraction to test whether extraction out of an adjunct is indeed in principle possible for elements base-generated at the adjunct edge. One relevant case is given below, where an instrumental nominal functions as an adjunct (see Bošković 2006 for discussion of such adjuncts).<sup>35</sup>

- (48) Trčao je šumom.  
 run is forest.instr  
 ‘He ran through a/the forest.’

That the instrumental nominal in (48) is indeed an adjunct is confirmed by extraction. First, extraction of the nominal in question out of an island yields an ECP-strength, not a Subjacency-strength violation, as illustrated by the contrast in (49).

- (49) a. \*Šumom<sub>i</sub> se pitaš [kad je trčao t<sub>i</sub>].  
 forest.instr refl wonder when is run  
 ‘You wonder when he ran through a/the forest.’  
 b. ??Šumu<sub>i</sub> se pitaš [kad je posjekao t<sub>i</sub>].  
 forest.acc refl wonder when is cut-down  
 ‘You wonder when he cut down a/the forest.’

Furthermore, while extraction of genitive complements of nouns is in general somewhat degraded in SC (cf. footnote 24), (50a), which involves extraction out of the nominal under consideration, is clearly worse than (50b), which involves extraction out of an object.

- (50) a. \*Moga djeda<sub>i</sub> je trčao [šumom t<sub>i</sub>].  
 my.gen grandfather.gen is run forest.instr  
 ‘He ran through the forest of my grandfather.’  
 b. ??Moga djeda<sub>i</sub> je volio [šumu t<sub>i</sub>].  
 my.gen grandfather.gen is loved forest.acc  
 ‘He loved the forest of my grandfather.’

*My grandfather* must undergo movement to the edge of the adjunct TNP in (50a) (or it could not move out of it, the TNP being a phase). While (50a) is unacceptable, movement out of the adjunct TNP in question turns out to be possible if the element moving out of it is base-generated at its

---

<sup>35</sup>It may be worth noting here that the word order in SC is rather free; thus *Šumom je trčao* is also possible. In fact, since even participles that follow auxiliaries in SC undergo movement (see Bošković 2001, Stjepanović 1998, 1999), participles are not a reliable diagnostic for determining the structural position of elements that are adjacent to them.

edge. As discussed above, possessors are base-generated at the TNP-phase edge in SC. Importantly, in contrast to extraction of the complement of the TNP-adjunct in question, extraction of the possessor of the TNP-adjunct in question is possible.

- (51) Ivanovom<sub>i</sub> je on trčao [t<sub>i</sub> šumom].  
 Ivan's.instr is he run forest.instr  
 'He ran through Ivan's forest.'

The contrast between (50a) and (51), where the moving element has to move to the edge of the relevant TNP in (50a) while it is base-generated at its edge in (51), mirrors the pattern of extraction out of moved elements, and can be captured if extraction out of adjuncts also involves extraction out of moved elements.

Another relevant case is provided by a particular type of cognate objects. There is a great deal of literature regarding the argument/adjunct status of cognate objects. Marelj (2015) shows that such objects do not behave uniformly regarding the issue in question in SC. In particular, she shows that accusative cognate objects like the one in (53) are arguments, while instrumental cognate objects like the one in (52) are adjuncts. Notice in this respect that the verb in (52) is ergative (the only theta-role the verb has is discharged by *he*), and that (52) can be used to answer an adjunct question like the one in (54). (Furthermore, the cognate object in question behaves like the adjunct TNP from (48) with respect to the extraction tests noted above, see Marelj 2015. See Marelj 2015 for a number of additional arguments for the adjunct status of the nominal in question; she shows that the cognate objects in (52) and (53) consistently show different behavior with respect to the relevant tests.)

- (52) Umro je prirodnom smrću.  
 died is natural.instr death.instr  
 'He died a natural death.'
- (53) Sanja san.  
 dreams.acc dream  
 'He dreams a dream.'
- (54) Kako je umro? Užasnom smrću.  
 how is died terrible.instr death.instr  
 'How did he die? A horrible death.'

The nominal in (52) is thus an adjunct. Importantly, extraction out of it is still possible for elements base-generated at its edge, as illustrated by (55), which involves extraction of an agreeing possessor that was discussed above.

- (55) Isusovom<sub>i</sub> je umro [t<sub>i</sub> smrću].  
 Jesus'.instr is died death.instr

‘He died the death of Jesus.’

The data discussed in this section indicate that adjuncts exhibit the same pattern of extraction as moved elements: just like the ban on movement out of moved elements is voided for elements base-generated at the edge of the moved element the ban on extraction out of adjuncts is voided for elements base-generated at the adjunct edge. The parallelism can be captured if adjuncts undergo movement, in which case extraction out of adjuncts involves extraction out of moved elements.

I tentatively suggest the following as an implementation of this adjunct movement. There are two types of treatments of adjuncts in the literature: a more traditional approach where adjuncts are adjoined to, or function as additional Specs of, existing phrases, for example vP or VP, and a Cinque (1999)-style analysis, where adjuncts are located in the Specs of dedicated functional projections, each traditional adjunct being located in the Spec of a distinct FP. Suppose now that both of these are correct: adjuncts start as Specs of/adjuncts to existing phrases (which are not adjunct-dedicated) like vP or VP, and then move to the Spec of Cinque-style FPs.<sup>36</sup> Movement out of adjuncts will then involve movement out of moved elements. Since elements that function as adjuncts have all independently been argued to be phases (see Bošković 2013a, 2014), the account of (1) from section 2 can then extend to the Adjunct Condition.

It should be noted that I do not rule out the possibility of an alternative analysis. In fact, quite independently of the analysis suggested above, the data pertaining to extraction out of adjuncts discussed in this section suggest that the problem with extraction out of adjuncts is getting to the edge of the adjunct; if an element can be base-generated at the edge of the adjunct it can extract. This in itself is potentially a rather important point regarding the still mysterious nature of the ban on extraction out of adjuncts. I certainly do not rule out the possibility that there can be ways of capturing the problem with getting to the edge of an adjunct that do not tie it to the generalization in (1).

## 6. Conclusion

To conclude, I have shown that the gist of the freezing effect, i.e. the ban on movement out of moved elements (cf. (1)), naturally falls out from the phasal/labeling system. The proposed account of (1) leaves room for legitimate “violations” of (1) in well-defined configurations, where movement out of moved elements was shown to indeed take place. The proposed analysis thus actually does not deduce (1), which rigidly bans movement out of moved elements, but a modified version of (1), which does allow such movement in certain contexts. This means that the

---

<sup>36</sup>I am generalizing here Cinque’s analysis to all traditional clausal-level adjuncts. (I leave the details of implementation open: it is possible that we are dealing (in some cases) with rightward movement, or leftward movement with pronunciation of a lower copy motivated by prosodic reasons (for example the prosodic heaviness of clauses; see Bobaljik 1995, Bošković 2001, Bošković and Nunes 2007, Franks 1998, Landau 2003, among many others, on the mechanism in question).)

traditional ban on movement out of moved elements itself should be restated; in fact, we have seen that its original formulation, given in (1), is both too strong (it incorrectly rules out acceptable instances of movement out of moved elements) and too weak (it fails to rule out certain constructions that do not involve movement out of a moved element but which I have argued should be unified with the unacceptable cases of extraction out of moved elements). In that vein, I have argued for a reformulation of the traditional ban on movement out of moved elements as in (56) (cf. also (31)), which in turn can be restated as in (57) in the labeling framework.

(56) Phases with non-agreeing Specifiers cannot undergo movement.

(57) Unlabeled elements cannot undergo movement.

The generalizations in (56)-(57) capture all the cases given in the literature to support the traditional ban in (1). They also capture a number of cases where movement out of a moved element is allowed to take place (as in German/Dutch *r*-pronoun constructions, Slavic left-branch extraction, and quantifier float more generally), which are problematic for (1). Moreover, since they do not appeal to movement out of a moved element the generalizations can also be extended to some cases where such movement does not take place (as with the immobility of V-2 clauses in German), which the traditional ban in (1) has nothing to say about. (56)-(57) are thus better empirically supported than the traditional ban in (1). What the phase/labeling-based analysis proposed in this article deduces is in fact the generalizations in (56)-(57), not the traditional ban in (1).

Under the proposed analysis, the traditional freezing effect arises with successive-cyclic movement: since successive-cyclic movement does not result in labeling (due to the lack of feature-sharing), it “delabels” the element whose edge it targets. Since labels are a prerequisite for phases, this way it also devoids the element in question (XP) of phasehood, making it impossible for it to undergo movement. Given that the cycle forces movement to the edge of XP to occur before movement of XP, we then deduce the empirical effects of (1) (more precisely, the generalizations in (56)-(57)).

It is worth emphasizing here that the current analysis provides a new perspective on movement out of moved elements. Under the current analysis, the problem with the unacceptable cases of movement of YP out of moved element XP does not arise at the point of movement of YP out of XP (as is generally the case in other accounts of the ban in question); the problem arises already with the movement of XP, i.e. XP itself cannot undergo movement in this case—what should be later movement out of moved XP is then trivially blocked. In other words, it is not the case that movement of XP freezes its internal structure; rather, movement of YP to the edge of XP (for successive-cyclic reasons) prevents movement of XP.

The discussion in the article also provides a new perspective on the traditional Adjunct Condition, i.e. the ban on movement out of adjuncts. We have seen that movement out of adjuncts is possible in the same configuration as movement out of moved elements. To capture this, I have suggested a unified account of the traditional Adjunct Condition and the ban on movement out of

moved elements, a suggestion which however has far-reaching consequences that cannot be fully explored here. More neutrally (i.e. independently of the suggested account), the data pertaining to extraction out of adjuncts discussed in this article indicate that the problem with extraction out of adjuncts is getting to the edge of the adjunct; if an element can be base-generated at the edge of the adjunct it can extract.

### Appendix: Smuggling and the ban on movement out of moved elements

I will end the article on a somewhat speculative note.<sup>37</sup> The cases where movement out of a moved element takes place which are blocked by (56)-(57) involve successive-cyclic movement, the reason for this being that successive-cyclic movement delabels the element it targets due to the lack of agreement. This is also the reason why the effect in question is generally confined to phases. Given the PIC, only phases must be targeted by successive-cyclic movement, hence the freezing effect that successive-cyclic movement has on the element it targets. Now, there are proposals in the literature where movement out of a moved element takes place where the latter is not a phase. This is for example the case with Collins's (2005b) smuggling account of passives. Collins argues that (58) is derived as follows: PartP moves to SpecVoiceP, crossing *Mary*, after which *John* moves out of moved PartP. (Collins actually assumes that *John* moves to SpecPartP although, as far as I can tell, the movement is not necessary. I therefore assume that it does not take place.) Under Collins's analysis, (58) then involves movement out of a moved element.

(58) John<sub>i</sub> was [<sub>VoiceP</sub> [<sub>PartP</sub> arrested t<sub>i</sub>]<sub>j</sub> [<sub>Voice'</sub> by [<sub>vP</sub> Mary [<sub>v'</sub> v t<sub>j</sub>]]]]

The smuggling derivation in (58) is not blocked by (56)-(57).<sup>38</sup> As discussed above, the issue that the generalizations in (56)-(57) put their finger on is raised by successive-cyclic movement, which delabels its target due to the lack of agreement. The issue in question inevitably arises only with phases, since only phases must be targeted by successive-cyclic movement due to the PIC. The movement-out-of-a-moved-PartP derivation does not involve movement of a phase,<sup>39</sup> hence the issue in question does not arise with this derivation. Since nothing in (56)-(57) in principle bans movement out of a moved element, the derivation in question is then not blocked by (56)-(57). The issue that does arise with the derivation in (58) concerns (12): if only phases can undergo movement, the derivation in question is ruled out independently.

As noted above, the derivation in (58) conforms with the restatement of the traditional ban on movement out of moved elements argued for here, i.e. (56)-(57). However, it actually does not conform with the deduction of (56)-(57) proposed in this article for the simple reason that the

---

<sup>37</sup>The discussion in this appendix was prompted by comments from Luigi Rizzi.

<sup>38</sup>Collins (2005a) proposes a smuggling derivation for the *seem*+experiencer raising construction in English. The derivation he proposes can be easily modified so that the discussion of (58) in this appendix also applies to it.

<sup>39</sup>For Collins (2005b), VoiceP is the phase here.

deduction relies on (12). Therefore, if derivations like the one in (58) were to be allowed, (56)-(57) can still be maintained but a new deduction of (56)-(57) would be needed that would not appeal to (12). As a brief speculation regarding this issue, consider (57) in this respect. (57) may be deducible independently of (12) on the view on which movement is driven by an uninterpretable/unvalued feature of the moving element, as in Bošković (2007, 2011), since an unlabeled element could not have such a feature under the assumption that projection/labeling is necessary for projecting any features. The same may hold on the view where movement is motivated by the EPP feature, as in Chomsky (2000, 2001), if the satisfaction of the EPP feature is tied to for example categorial features in that the moving element would need to have a categorial feature to satisfy the EPP feature (the underlying assumption again being that projection/labeling is necessary for projecting any features).

At any rate, returning to (58), if (12) holds, derivations where a non-phase moves, like the one in (58), will be ruled out. The generalizations in (56)-(57) are, however, themselves independent of the issue of whether (12) holds, i.e. they do not depend on only phases being able to undergo movement. They kick in in the case of successive-cyclic movement because successive-cyclic movement delabels the element it targets due to the lack of agreement.<sup>40</sup> Their effect is confined to phases because only phases must be targeted by successive-cyclic movement, given the PIC. If non-phases can in principle move, their movement would not be affected by (56)-(57) and the freezing effect more generally, since the PIC would not force movement through their edge.

## References

- Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. Doctoral dissertation, University of Connecticut, Storrs.
- Abels, Klaus. 2007. Towards a restrictive theory of (remnant) movement. *Linguistic Variation Yearbook* 7: 57-120.
- Alexiadou, Artemis. 2005. Possessors and (in)definiteness. *Lingua* 115: 787-819.
- Barbiers, Sjef. 2002. Remnant stranding and the theory of movement. In *Dimensions of movement: From features to remnants*, ed. by Artemis Alexiadou, Elena Anagnostopoulou, Sjef Barbiers and Hans-Martin Gartner, 47-67. Amsterdam: John Benjamins.
- Besten, Hans den and Gert Webelhuth. 1990. Stranding. In *Scrambling and barriers*, ed. by Günther Grewendorf and Wolfgang Sternefeld, 77-92. Amsterdam: John Benjamins.
- Blümel, Andreas. in press. Exocentric root declaratives: Evidence from V2. In *Labels and roots*, ed. by Leah Bauke and Andreas Blümel. Berlin: de Gruyter Mouton.

---

<sup>40</sup>For ease of exposition, I am putting aside here cases like V-2 movement to SpecCP in Germanic, which, as discussed above, is formally the same as successive-cyclic movement in the relevant respect. Such cases are not in principle confined to phases (unless we assume that only phases can have the EPP property, see here Chomsky 2008).

- Bobaljik, Jonathan. 1995. Morphosyntax: The syntax of verbal inflection. Doctoral dissertation, MIT, Cambridge, Mass.
- Bobaljik, Jonathan David. 2003. 'Floating quantifiers: Handle with care.' In *The Second Glot International State-of-the-Art Book*, 107-148. Berlin: Mouton de Gruyter.
- Boeckx, Cedric. 2003. *Islands and Chains*. Amsterdam: John Benjamins.
- Boeckx, Cedric. 2008. *Bare Syntax*. Oxford: Blackwell.
- Broekhuis, Hans. 2005. Extraction from subjects: some remarks on Chomsky's *On phases*. In *Organizing the Grammar: Studies in Honor of Henk van Riemsdijk*, ed. by Hans Broekhuis, Norbert Corver, Riny Huybregts, Ursula Kleinhenz and Jan Koster, 59-68. Berlin: Mouton de Gruyter.
- Bošković, Željko. 1992. Clausal selection, subjacency, and minimality. Ms., University of Connecticut, Storrs.
- Bošković, Željko. 1997. *The Syntax of Nonfinite Complementation: An Economy Approach*. Cambridge, Mass.: MIT Press.
- Bošković, Željko. 2001. *On the Nature of the Syntax-phonology Interface: Cliticization and Related Phenomena*. Amsterdam: Elsevier Science.
- Bošković, Željko. 2002. A-movement and the EPP. *Syntax* 5: 167-218.
- Bošković, Željko. 2004a. Be careful where you float your quantifiers. *Natural Language and Linguistic Theory* 22: 681-742.
- Bošković, Željko. 2004b. Topicalization, focalization, lexical insertion, and scrambling. *Linguistic Inquiry* 35: 613-638.
- Bošković, Željko. 2005. On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59: 1-45.
- Bošković, Željko. 2006. Case checking vs Case assignment and the Case of adverbial NPs. *Linguistic Inquiry* 37: 522-533.
- Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38: 589-644.
- Bošković, Željko. 2008a. On successive cyclic movement and the freezing effect of feature checking. In *Sounds of Silence: Empty Elements in Syntax and Phonology*, ed. by Jutta M. Hartmann, Veronika Hegedüs, and Henk van Riemsdijk, 195-233. Amsterdam: Elsevier North Holland.
- Bošković, Željko. 2008b. On the operator freezing effect. *Natural Language and Linguistic Theory* 26: 249-287.
- Bošković, Željko. 2008c. What will you have, DP or NP? In *Proceedings of the North East Linguistic Society 37*, ed. by Emily Elfner and Martin Walkow, 101-114. Amherst: GLSA, University of Massachusetts.
- Bošković, Željko. 2009. On Leo Tolstoy, its structure, Case, left-branch extraction, and prosodic inversion. In *Studies in South Slavic Linguistics in Honor of E. Wayles Browne*, ed. by Steven Franks, Vrinda Chidambaram, and Brian Joseph, 99-122. Bloomington Slavica.

- Bošković, Željko. 2011. On unvalued uninterpretable features. In *Proceedings of the 39<sup>th</sup> Conference of the North-Eastern Linguistic Society (NELS 39)*, ed. by Suzi Lima, Kevin Mullin, and Brian Smith, 109-120. Amherst: GLSA, University of Massachusetts.
- Bošković, Željko. 2012. On NPs and clauses. In *Discourse and Grammar: From Sentence Types to Lexical Categories*, ed. by Günther Grewendorf and Thomas Ede Zimmermann, 179-242. Berlin: Mouton de Gruyter.
- Bošković, Željko. 2013a. Phases beyond clauses. In *The Nominal Structure in Slavic and Beyond*, ed. by Lilia Schürcks, Anastasia Giannakidou, and Urtzi Etxeberria, 75-128. Berlin: Mouton De Gruyter.
- Bošković, Željko. 2013b. Traces do not head islands: What can PF deletion rescue? In *Deep Insights, Broad Perspectives: Essays in Honor of Mamoru Saito*, ed. by Yoichi Miyamoto, Daiko Takahashi, Hideki Maki, Masao Ochi, Koji Sugisaki, and Asako Uchibori, 56-93. Tokyo: Kaitakusha.
- Bošković, Željko. 2014. Now I'm a phase, now I'm not a phase: On the variability of phases with extraction and ellipsis. *Linguistic Inquiry* 45: 27-89.
- Bošković, Željko. 2015. From the Complex NP Constraint to everything: On deep extractions across categories. *The Linguistic Review* 32: 603-669.
- Bošković, 2016a. Getting really edgy: On the edge of the edge. *Linguistic Inquiry* 47: 1-33.
- Bošković, Željko. 2016b. On the timing of labeling: Deducing Comp-trace effects, the Subject Condition, the Adjunct Condition, and tucking in from labeling. *The Linguistic Review: Special Issue on Labels* 33:17-66.
- Bošković, Željko. 2016c. On the impossibility of moving IPs and V-2 clauses and labeling. Ms., University of Connecticut, Storrs.
- Bošković, Željko. in press. On extraction out of inherently Case-marked elements. In *Proceedings of Formal Approaches to Slavic Linguistics 25 (FASL 25)*. Ann Arbor, MI: Michigan Slavic Publications.
- Bošković, Željko, and Jairo Nunes. 2007. The copy theory of movement: A view from PF. In *The Copy Theory of Movement*, ed. by Norbert Corver and Jairo Nunes, 13-74. Amsterdam: John Benjamins.
- Bošković, Željko and Daiko Takahashi. 1998. Scrambling and last resort. *Linguistic Inquiry* 29: 347-366.
- Chametzky, Robert. 1996. *A Theory of Phrase Markers and the Extended Base*. Albany, NY: SUNY Press.
- Cheng, Hsu-Te. 2012. Ellipsis: its correlates with phases and movement. Presented at GLOW 35, University of Potsdam, Potsdam.
- Chomsky, Noam. 1986. *Barriers*. Cambridge, Mass: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries. In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89-155. Cambridge: MIT Press.



- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, ed. by Michael Kenstowicz, 1-52. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2008. On phases. In *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133-166. Cambridge, Mass: MIT Press.
- Chomsky, Noam. 2013. Problems of projection. *Lingua* 130: 33-49.
- Chomsky, Noam. 2015. Problems of projection: Extensions. In *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, ed. by Elisa Di Domenico, Cornelia Hamann, and Simona Matteini, 3–16. Amsterdam/Philadelphia: John Benjamins.
- Cinque, Guglielmo. 1990. *Types of A'-dependencies*. Cambridge, Mass.: MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads: A Cross-linguistic Perspective*. Oxford: Oxford University Press.
- Collins, Chris. 1994. Economy of derivation and the generalized proper binding condition. *Linguistic Inquiry* 25: 45-61.
- Collins, Chris. 2005a. A smuggling approach to raising in English. *Linguistic Inquiry* 36:289-298.
- Collins, Chris. 2005b. A smuggling approach to the passive in English. *Syntax* 8:81-120.
- Corver, Norbert. 1992. On deriving left branch extraction asymmetries: A case study in parametric syntax. In *Proceedings of the 22<sup>nd</sup> Conference of the North East Linguistic Society (NELS 22)*, ed. by Kimberly Broderick, 67-84. Amherst: GLSA, University of Massachusetts.
- Corver, Norbert. in press. Freezing effects. In *Blackwell Companion to Syntax*.
- van Craenenbroeck, Jeroen. 2010. *The Syntax of Ellipsis: Evidence from Dutch Dialects*. New York, NY: Oxford University Press.
- Culicover, Peter and Kenneth Wexler. 1977. Some syntactic implications of a theory of language learnability. In *Formal Syntax*, ed. by Peter Culicover, Thomas Wasow, and Adrian Akmajian, 7-60. New York: Academic Press.
- Despić, Miloje. 2011. Syntax in the absence of determiner phrase. Doctoral dissertation, University of Connecticut, Storrs.
- Despić, Miloje. 2013. Binding and the structure of NP in Serbo-Croatian. *Linguistic Inquiry* 44: 239-270.
- Despić, Miloje. 2015. Some issues in the theory of nominal domain: Reflexive possessives, left branch extraction, and quantifier raising. Presented at Mie University, Mie, Japan, July 10<sup>th</sup> 2015.
- Diesing, Molly. 1992. *Indefinites*. Cambridge, Mass.: MIT Press.
- Diesing, Molly. 1996. Semantic variables and object shift. In *Studies in Comparative Germanic Syntax. Vol. 2*. ed. by Höskuldur Thráinsson, Samuel D. Epstein, and Steve Peter, 66-84. Dordrecht: Kluwer.
- Dikken, Marcel den. 2009. Arguments for successive-cyclic movement through SpecCP. *Linguistic Variation Yearbook* 9: 89-126.
- Epstein, Samuel David. 1992. Derivational constraints on A'-chain formation. *Linguistic Inquiry* 23: 235-259.

- Fanselow, Gisbert and Damir Ćavar. 2002. Distributed deletion. In *Theoretical Approaches to Universals*, ed. by Artemis Alexiadou, 65-107. Amsterdam: John Benjamins.
- Franks, Steven. 1998. Clitics in Slavic. Paper presented at the Comparative Slavic Morphosyntax Workshop, Spencer Creek, Indiana, June 1998.
- Franks, Steven, and Ljiljana Progovac. 1994. On the placement of Serbo-Croatian clitics. In *Indiana Linguistic Studies 7, Proceedings of the 9th Biennial Conference on Balkan and South Slavic Linguistics, Literature, and Folklore*, 69-78. Bloomington: Indiana University Linguistic Club.
- Freidin, Robert, 1992. *Foundations of Generative Syntax*. Cambridge, Mass.: MIT Press.
- Gallego, Ángel J. 2007. Phase theory and parametric variation. Doctoral dissertation. Universitat Autònoma de Barcelona.
- Gallego, Ángel. 2009. On freezing effects. *Iberia: An International Journal of Theoretical Linguistics* 1: 33-51.
- Gallego, Ángel, and Juan Uriagereka. 2007a. Sub-extraction from subjects: A phase theory account. In *Romance Linguistics 2006: Selected Papers from the 36th Linguistic Symposium on Romance Languages (LSRL), New Brunswick, March 31-April 2, 2006*, ed. by José Camacho, Nydia Flores-Ferrán, Liliana Sánchez, Viviane Déprez, and María José Cabrera, 155–168. Amsterdam: John Benjamins.
- Gallego, Ángel and Juan Uriagereka. 2007b. Conditions on sub-extraction. In *Coreference, Modality, and Focus: Studies on the Syntax–Semantics Interface*, ed. by Luis Eguren and Olga Fernández-Soriano, 45-70. Amsterdam: John Benjamins.
- Grewendorf, Günther. 1989. *Ergativity in German*. Dordrecht: Foris.
- Güneş, Güliz, and Anikó Lipták. 2016. Aggressively non-D-linked, relatively non-stressed. Paper presented at *Ellipsis across Borders*, Sarajevo University, June 2016.
- Haegeman, Liliane. 1996. Verb second, the split CP and null subjects in early Dutch finite clauses. *GenGenP* 4.2: 133–175.
- Haegeman, Liliane, Ángel L. Jiménez-Fernández, and Andrew Radford. 2014. Deconstructing the Subject Condition in terms of cumulative constraint violation. *The Linguistic Review* 31:73–150.
- Hartman, Jeremy, and Ruixi Ressay Ai. 2009. A focus account of swiping. In *Selected Papers from the Cyprus 2006 Syntaxfest*, ed. Kleanthes Grohmann and Phoevos Panagiotidis, 92–122. Cambridge: Cambridge Scholars Publishing.
- Harwood, William. 2013. Being progressive is just a phase: Dividing the functional hierarchy. Doctoral dissertation, University of Gent.
- Holmberg, Anders. 2015. Verb second. In *Syntax—Theory and Analysis. An International Handbook*, vol. 1, ed. by Tibor Kiss and Artemis Alexiadou, 242–283. Berlin: de Gruyter.
- Huang, C.-T. James. 1993. Reconstruction and the structure of VP: Some theoretical consequences. *Linguistic Inquiry* 24: 103-138.
- Hunter, Tim. 2015. Deconstructing Merge and Move to make room for adjunction. *Syntax* 18: 266-319.

- Huybregts, M. A. C. 1976. Vragende(r)wijs: Progressieve taalkunde. In *Lijnen van taaltheoretisch onderzoek*, ed. by Geert Koefoed and Arnold Evers, 303–366. Groningen: H. D. Tjeenk Willink.
- Johnson, Kyle. 1986. A case for movement. Doctoral dissertation, MIT, Cambridge, Mass.
- Johnson, Kyle. 1991. Object positions. *Natural Language & Linguistic Theory* 9: 577-636.
- Jouitteau, Mélanie. 2008. The Brythonic reconciliation. In *Linguistic Variation Yearbook*, ed. by Jeroen van Craenenbroeck, 163–200. Amsterdam: John Benjamins.
- Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge, Mass.: MIT Press.
- Landau, Idan. 2003. Modular recoverability: Chain resolution in Hebrew V(P)-fronting. Ms., Beer-Sheva, Israel.
- Lasnik, Howard. 1999. *Minimalist analysis*. Oxford: Blackwell.
- Lasnik, Howard. 2001. Subjects, objects, and the EPP. In *Objects and Other Subjects: Grammatical Functions, Functional Categories, and Configurationality*, ed. by William D. Davies and Stanley Dubinsky, 103–121. Dordrecht: Kluwer.
- Lasnik, Howard and Mamoru Saito. 1992. *Move  $\alpha$ : Conditions on its Application and Output*. Cambridge, Mass.: MIT Press.
- Legate, Julie Anne. 2014. *Voice and v: Lessons from Acehnese*. Cambridge, MA: MIT Press.
- Lohndal, Terje. 2007. Sub-extraction and the freezing effect. Ms., University of Oslo.
- Lohndal, Terje. 2011. Freezing effects and objects. *Journal of Linguistics* 47: 163-199.
- Marelj, Marijana. 2008. Probing the relation between binding and movement: A left branch extraction and pronoun insertion strategy. In *Proceedings of North East Linguistic Society 37 (NELS 37)*, ed. by Emily Elfner and Martin Walkow, 73-86. Amherst: GLSA, University of Massachusetts.
- Marelj, Marijana. 2011. Bound-variable anaphora and Left Branch Condition. *Syntax* 14:205-229.
- Marelj, Marijana. 2015. On arguments and predicates: In the realm of COs. Paper presented at Formal Description of Slavic Languages (FDSL) 11, Potsdam, Germany, December 2015.
- Matushansky, Ora. 2005. Going through a phase. In *MIT Working Papers in Linguistics 49: Perspectives on Phases*, ed. by Martha McGinnis and Norvin Richards, 157–181. Cambridge, Mass.: Department of Linguistics, MITWPL.
- Merchant, Jason. 2002. Swiping in Germanic. In *Studies in Comparative Germanic Syntax*, ed. Werner Abraham and C. Jan-Wouter Zwart, 289-315. Amsterdam: John Benjamins.
- Müller, Gereon. 1998. *Incomplete Category Fronting: A Derivational Approach to Remnant Movement in German*. Dordrecht: Kluwer.
- Müller, Gereon. 2010. On deriving CED effects from the PIC. *Linguistic Inquiry* 41: 35-82.
- Munn, Alan. 1995. The possessor that stayed close to home. In *Proceedings of the 24th Western Conference on Linguistics*, ed. by Vida Samiian and Jeanette Schaeffer, 181-195. Fresno: California State University, Department of Linguistics.
- Neeleman, Ad, and Hans van de Koot. 2010. A local encoding of syntactic dependencies and its consequences for the theory of movement. *Syntax* 13: 331–372.

- Noonan, Máire. 1999. Successive cyclicity phenomena in wh-movement constructions. *Proceedings of the West Coast Conference on Formal Linguistics 18 (WCCFL 18)*, 406-419. Somerville: Cascadilla Press.
- Ormazabal, Javier, Juan Uriagereka, and Miriam Uribe-Etxebarria. 1994. Word order and wh-movement: Towards a parametric account. Paper presented at the 18<sup>th</sup> GLOW Colloquium, Vienna, April 1994.
- Postal, Paul M. 1972. On some rules that are not successive cyclic. *Linguistic Inquiry* 3: 211-222.
- Rackowski, Andrea and Norvin Richards. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry* 36: 565-99.
- Radford, Andrew. 2000. NP shells. *Essex Research Reports in Linguistics* 33: 2-20.
- Radford, Andrew, and Eiichi Iwasaki. 2015. On swiping in English. *Natural Language and Linguistic Theory* 33:703-744.
- Reis, Marga. 1997. Zum syntaktischen Status unselbständiger Verbzweit-Sätze. In *Sprache im Fokus: Festschrift für Heinz Vater zum 65. Geburtstag*, ed. by Christa Dürscheid, Karl Heinz Ramers, and Monika Schwarz, 121–144. Tübingen: Niemeyer.
- Richards, Norvin. 2001. *Movement in Language: Interactions and Architectures*. Oxford: Oxford University Press.
- van Riemsdijk, Henk. 1997. Push chains and drag chains: Complex predicate split in Dutch. In *Scrambling*, ed. by Shigeo Tonoike, 7-33. Tokyo: Kurosio Publishers.
- Rizzi, Luigi. 2006. On the form of chains: Criterial positions and ECP effects. In *Wh-movement: Moving on*, ed. by Lisa Lai-Shen Cheng and Norbert Corver, 97-133. Cambridge, Mass.: MIT Press.
- Rizzi, Luigi. 2016. Labeling, maximality and the head-phrase distinction. In *The Linguistic Review: Special Issue on Labels* 33:103-127.
- Roberts, Ian. 2004. The C-system in Brythonic Celtic languages, V2, and the EPP. In *The Cartography of Syntactic Structures, vol. 2: The Structure of CP and IP*, ed. by Luigi Rizzi, 297–327. New York and Oxford: Oxford University Press.
- Roberts, Ian, and Anna Roussou. 2002. The Extended Projection Principle as a condition on the tense dependency. In *Subjects, Expletives, and the EPP*, ed. by Peter Svenonius, 125–155. New York: Oxford University Press.
- Ross, John Robert. 1967. Constraints on variables in syntax. Doctoral dissertation, MIT, Cambridge, Mass.
- Ross, John Robert. 1974. Three batons for cognitive psychology. In *Cognition and the Symbolic Processes*, ed. by Walter B. Weimer and David Stuart Palermo, 63-124. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Runić, Jelena. 2014a. A new look at argument ellipsis: Evidence from Slavic. In *Proceedings of the North East Linguistic Society 43 (NELS 43)*, ed. by Hsin-Lun Huang, Ethan Poole, and Amanda Rysling, 91-102. Amherst: GLSA, University of Massachusetts.
- Runić, Jelena. 2014b. A new look at clitics, clitic doubling, and argument ellipsis: Evidence from Slavic. Doctoral dissertation, University of Connecticut, Storrs.

- Saito, Mamoru. 2016. (A) case for labeling: Labeling in languages without phi-feature agreement. In *The Linguistic Review: Special Issue on Labels* 33:129-175.
- Saito, Mamoru and Naoki Fukui. 1998. Order in phrase structure and movement. *Linguistic Inquiry* 29: 439-474.
- Sauerland, Uli and Paul Elbourne. 2002. Total reconstruction, PF movement, and derivational order. *Linguistic Inquiry* 33:283-319.
- Schneider-Zioga, Patricia. 2009. Wh-agreement and bounded and unbounded movement. In *Merging Features*, ed. by Jose Brucart, Anna Gavorro, and Juame Sola, 46-59. Oxford: Oxford University Press.
- Shlonsky, Ur. 1991. Quantifiers as functional heads: A study of quantifier float in Hebrew. *Lingua* 84:159-180.
- Shlonsky, Ur. 2014. A note on labeling, Berber states and VSO order. In *The Form of Structure, the Structure of Form: Essays in Honor of Jean Lowenstamm*, ed. by Sabrina Bendjaballah, Noam Faust, Mohamed Lahrouchi, and Nicola Lampitelli, 349–360. Amsterdam: John Benjamins.
- Sportiche, Dominique. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19: 425-49.
- Starke, Michal. 2001. Move dissolves into Merge: A theory of locality. Doctoral dissertation, University of Geneva.
- Stepanov, Arthur. 2001. Cyclic domains in syntactic theory. Doctoral dissertation, University of Connecticut, Storrs.
- Stepanov, Arthur. 2007. The end of CED?: Minimalism and extraction domains. *Syntax* 10: 80-126.
- Stjepanović, Sandra. 1998. VP ellipsis in a V raising language: implications for verbal morphology. In *Proceedings of ESCOL 14*, 192-203. Ithaca, NY: CLC Publications, Cornell University (Cornell Linguistics Circle).
- Stjepanović, Sandra. 1999. What do second position cliticization, scrambling, and multiple wh-fronting have in common. Doctoral dissertation, University of Connecticut, Storrs.
- Stjepanović, Sandra. 2010. Left branch extraction in multiple wh-questions: A surprise for question interpretation. In *Proceedings of Formal Approaches to Slavic Linguistics 18 (FASL 18)*, ed. by Wayles Browne, Adam Cooper, Alison Fisher, Esra Kesici, Nikola Predolac, and Draga Zec, 502-517. Ann Arbor, MI: Michigan Slavic Publications.
- Stjepanović, Sandra. 2011. Differential object marking in Serbo-Croatian: Evidence from left branch extraction in negative concord constructions. In *Proceedings of Formal Approaches to Slavic Linguistics 19 (FASL 19)*, ed. by John Bailyn, Ewan Dunbar, Yakov Kronrod, and Chris LaTerza, 99-115. Ann Arbor, MI: Michigan Slavic Publications.
- Stjepanović, Sandra. 2003. A word-order paradox resolved by copy deletion at PF. *Linguistic Variation Yearbook* 3: 139-177.
- Takahashi, Daiko. 1994. Minimality of movement. Doctoral dissertation, University of Connecticut, Storrs.

- Takahashi, Masahiko. 2012. Phases and the structure of NP: A comparative study of Japanese and Serbo-Croatian. In *Proceedings of Formal Approaches to Slavic Linguistics 21 (FASL 21)*, ed. by Steven Franks, Markus Dickinson, George Fowler, Melissa Whitcombe, and Ksenia Zanon, 359-372. Ann Arbor: Michigan Slavic Publications.
- Talić, Aida. 2014. Extraordinary complement extraction: PP-complements and inherently case-marked nominal complements. *Studies in Polish Linguistics* 8: 127-150.
- Talić, Aida. 2015. Adverb extraction, specificity, and structural parallelism. *Canadian Journal of Linguistics* 60:417-454.
- Thiersch, Craig. in press. Remnant movement. In *Blackwell Companion to Syntax*.
- Torrego, Esther. 1985. On empty categories in nominals. Ms., University of Massachusetts, Boston.
- Torrego, Esther. 1998. *The Dependencies of objects*. Cambridge, Mass.: MIT Press.
- Trenkić, Danijela. 2004. Definiteness in Serbian/Croatian/Bosnian and some implications for the general structure of the nominal phrase. *Lingua* 114: 1401-1427.
- Uriagereka, Juan. 1988. On government. Doctoral dissertation, University of Connecticut, Storrs.
- Uriagereka, Juan. 2012. *Spell-out and the Minimalist Program*. Oxford: Oxford University Press.
- van Urk, Coppe. 2015. A uniform syntax for phrasal movement: A case study of Dinka Bor. Doctoral dissertation, MIT, Cambridge, MA.
- Webelhuth, Gert. 1992. *Principles and Parameters of Syntactic Saturation*. New York: Oxford University Press.
- Wexler, Kenneth and Peter Culicover. 1980. *Formal Principles of Language Acquisition*. Cambridge, Mass.: MIT Press.
- Wurmbrand, Susanne. 2014. The Merge Condition. In *Minimalism and Beyond*, ed. by Peter Kosta, Steven L. Franks, Teodora Radeva-Bork, and Lilia Schürcks, 139–177. Amsterdam: John Benjamins.
- Zlatić, Larisa. 1994. An asymmetry in extraction from noun phrases in Serbian. In *Proceedings of the 9th Biennial Conference on Balkan and South Slavic Linguistics, Literature, and Folklore (=Indiana Linguistic Studies 7)*, 207-216. Bloomington: Indiana University Linguistic Club.
- Zlatić, Larisa. 1997. The structure of the Serbian noun phrase. Doctoral dissertation, University of Texas at Austin.
- Zyman, Erik. 2016. Quantifier float and the driving force for movement: Evidence from Janitzio P'urhepecha. Ms., University of California, Santa Cruz.