On the Locality and Motivation of Move and Agree: An Even More Minimal Theory

Željko Bošković

The article proposes a new theory of successive-cyclic movement that reconciles the early and the current minimalist approaches to it. As in the early approach, there is no feature checking in intermediate positions of successive-cyclic movement. However, as in the current approach and unlike in early minimalism, successive-cyclic movement starts before the final target of movement enters the structure, and Form Chain is eliminated. The locality of Move and the locality of Agree are shown to be radically different, Agree being free from several mechanisms that constrain Move, namely, phases and the Activation Condition. However, there is no need to take phases to define locality domains of syntax or to posit the Activation Condition as an independent principle. They still hold empirically for Move as theorems. The Generalized EPP (the ''I need a Spec'' property of attracting heads) and the Inverse Case Filter are also dispensable. The traditional Case Filter, stated as a checking requirement, is the sole driving force of A-movement. More generally, Move is always driven by a formal inadequacy (an uninterpretable feature) of the moving element, while Agree is target driven. The system resolves a lookahead problem that arises under the EPP-driven movement approach, where the EPP diacritic indicating that X moves is placed on Y, not X, although X often needs to start moving before Y enters the structure.

Keywords: Agree(ment), Activation Condition, case, (Generalized) Extended Projection Principle, phase, Spell-Out, successive-cyclic movement

1 Introduction

The goal of this article is to investigate the locality and motivation of Move and Agree. The investigation will also lead to important conclusions regarding a number of mechanisms, including the Activation Condition, the Extended Projection Principle (EPP), the Case Filter, and the nature of successive-cyclic movement. Focusing on the locality of Move and Agree, I will argue, contra Chomsky (2000, 2001), that the locality of the two is radically different,[1] Agree being free

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[1] See also Bošković 1998 and Bobaljik and Wurmbrand 2005.

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from several mechanisms that constrain movement, in particular, phases/the Phase Impenetrability Condition and the Activation Condition. However, the difference in the locality of Move and Agree will not be stipulated; rather, it will be shown to follow from independently motivated assumptions.

My point of departure in discussing the locality of Move will be a comparison between early and current minimalist approaches to successive-cyclic movement. In early minimalism (see Chomsky and Lasnik 1993, Takahashi 1994), successive-cyclic movement was driven not by feature checking but by a requirement that chain links be as short as possible. Furthermore, successive-cyclic movement was assumed to start only after the final target of movement enters the structure.[2] This approach is crucially based on the operation Form Chain, with syntactic conditions such as Last Resort and the Extension Condition constraining the Form Chain operation, not particular chain links, whose creation is licensed by the Minimize Chain Links requirement.

By contrast, later approaches to successive-cyclic movement (e.g., Chomsky 1995b, 2000, 2001, 2004) dispense with Form Chain, treating each step of successive-cyclic movement as a separate operation with its own feature-checking motivation. Under these approaches, each step of successive-cyclic movement must satisfy Last Resort and the Extension Condition. Furthermore, successive-cyclic movement starts before its final landing site enters the structure. (I will refer to this view as *early successive-cyclic movement*.) As discussed below, adopting early successive-cyclic movement has led to a lookahead problem: sometimes when doing successive-cyclic movement on cycle X, we need to know what will happen on a higher cycle Y.

In this article, I will propose a new account of successive-cyclic movement, applicable to both Ā- and A-movement, which reconciles the two existing approaches. As I will show, there is considerable evidence that successive-cyclic movement does not involve feature checking with intermediate heads (see also Bošković 2002a, Boeckx 2003b, and Chomsky, in press). As a result, like the Minimize Chain Links Principle (MCLP) approach to successive-cyclic movement and unlike the current, feature-checking approach, the theory developed here will not rely on feature checking in intermediate positions of successive-cyclic movement. However, like the current approach and unlike the MCLP approach, my analysis will not require adopting Form Chain. As a result, we will not have to wait for the final target of successive-cyclic movement to enter the structure to start successive-cyclic movement; that is, I will be adopting early successive-cyclic movement. However, I will show that the lookahead problem that the adoption of early successive-cyclic movement raises for the current, feature-checking analyses of successive-cyclic movement (where α often has to start moving before the element that is assumed to drive its movement (which is the final target) enters the structure) does not arise on my analysis. Chomsky's (2000) Activation Condition (AC), which requires that an element undergoing Move/Agree have an uninterpretable feature, will play a crucial role in the analysis. However, while Chomsky uses the AC to implement movement in general, I will argue that it should be used only to implement successive-cyclic movement. This move will enable me to actually dispense with the AC as an

[2] Thus, in the structure $[X_i\ Y\ t_i\ t_i]$, with (X_i, t_i, t_i) a three-member chain and Y the target of movement, X would not move until Y enters the structure.

independent condition of the grammar; its effects will be shown to follow as a matter of theorem. The AC's effects, which are involved in the implementation of successive-cyclic movement, will also make it possible to eliminate the generalized EPP mechanism, which in Chomsky's (2000, 2001) system is treated as a formal requirement on the target to have an (additional) specifier (this is the strength property of Chomsky's (1993) system). The mechanism in question will be argued to be completely dispensable. I will show that the Inverse Case Filter—the requirement that traditional case assigners assign their case (see Bošković 1997b, 2002a, Epstein and Seely 1999)—can also be eliminated. My analysis of the driving force of A-movement will crucially rely on the traditional Case Filter, which under various guises has been assumed in both Government-Binding (GB) Theory and the Minimalist Program (stated as a checking/valuation requirement in the latter). A system will be developed in which all movement, including successive-cyclic movement and final steps of movement, is always driven by a formal inadequacy (more precisely, an uninterpretable feature) of the moving element. Agree, as I will argue on the other hand, is target driven. The resulting system puts strong restrictions on when we have Move and when pure Agree, which should be taken as a conceptual argument in its favor. In particular, in configuration X . . . Y, where X asymmetrically c-commands Y and X and Y are involved in K-feature checking, marking the K-feature uninterpretable on Y will always result in movement of Y to XP (i.e., it will result in Move), while marking it uninterpretable only on X will always lead to pure Agree.

Finally, I will provide empirical evidence that phases and the Phase Impenetrability Condition (PIC) do not constrain Agree. This state of affairs is not surprising in the line of research pursued by Fox and Pesetsky (2005), who argue that the phase as a syntactic locality domain and the PIC should be eliminated, successive-cyclic movement being forced by phonological considerations. If phases/the PIC are phonological in nature, they should be irrelevant to Agree, which under the view of feature checking adopted here does not affect pronunciation. I will also tie the AC to the nature of overt movement, that is, pronunciation. As a result, I will argue that the AC does not affect Agree, in contrast to Move.

As should be clear from this summary, the article has a number of goals. Attempting to resolve all questions that could arise regarding the issues investigated here would be far too ambitious. As a result, I will often confine myself to pointing out what seem to be promising directions for future research, leaving some obvious problems unresolved.

The article is organized as follows. Section 2 discusses the two previous approaches to successive-cyclic movement: the MCLP approach and the feature-checking approach. Section 3 provides evidence against feature checking in intermediate positions of successive-cyclic movement and argues in favor of a uniform account of successive-cyclic A- and Ā-movement. Section 4 develops a new theory of successive-cyclic movement, which reconciles the two existing approaches and combines what seem to me to be the best aspects of each. This section also argues for eliminating the AC as an independent condition. Section 5 provides evidence that phases/the PIC do not constrain Agree and argues for eliminating them as syntactic locality domains. Section 6 argues for eliminating the Generalized EPP and the Inverse Case Filter and develops a system in which movement is always moving-element driven whereas Agree is target driven. Sections

4–6 also argue that Agree is AC-free. Section 7 is the conclusion. Finally, the appendix discusses a remaining issue regarding successive-cyclic *wh*-movement.

2 On Successive-Cyclic Movement

In the early minimalist framework, the standard assumption was that successive-cyclic movement—for example, movement of *what* to the specifier (Spec) of *that* in (1), which is a step in the formation of a larger chain that involves checking the [+wh] feature of the matrix interrogative C—is not driven by feature checking.

(1) What$_i$ do you think [$_{CP}$ t$_i$ [$_{C'}$ that Mary bought t$_i$]]?

Consider, for example, Takahashi's (1994) system, the most comprehensive account of the locality of movement in early minimalism, which is based on Chomsky and Lasnik's (1993:546) Minimize Chain Links Principle (MCLP). (Takahashi's approach has been revived in Bošković 2002a, Boeckx 2003b, and Chomsky, in press; see also Ochi 1998 and Stepanov 2001.) For Takahashi, successive-cyclic movement is not a result of feature checking. Rather, it is a result of the requirement that all chain links be as short as possible. This requirement forces element X undergoing movement of type Y to stop at every position of type Y on the way to its final landing site independently of feature checking. The MCLP thus forces *what* in (1) to pass through the embedded Spec,CP (an Ā-position) on its way to the matrix Spec,CP (also an Ā-position). In Bošković 2002a, I observe that the same holds for intermediate A-movement. Thus, the MCLP forces *the students* in (2) to pass through the embedded Spec,IP on its way to the matrix Spec,IP.[3]

(2) The students$_i$ seem [t$_i$ to have t$_i$ liked French].

Under the MCLP analysis, the intermediate Spec,CP and Spec,IP in the constructions under consideration are filled as a result of a property of the movements involved. We do not need to invoke a property of the embedded C and I to drive the movement to these positions. Notice also that since no feature checking is posited between a *wh*-phrase and declarative C, both (3), where nothing moves to the Spec of *that*, and (4), where a *wh*-phrase moves to the Spec of *that* and remains there in overt syntax, are easily accounted for. In particular, (4) violates Last Resort. As noted in Bošković 2002a, the Last Resort analysis of (4) can be extended to (5), if we assume that movement to the Spec of raising infinitives is driven by the MCLP, not feature checking.

(3) You think [that Mary bought a car].

(4) *Who thinks what that Mary bought?

(5) *There seems a man$_i$ to be t$_i$ in the garden.

The MCLP analysis crucially assumes the operation Form Chain. Under this approach, Last Resort is relevant to the formation of a chain, not links of a chain. In other words, formation of a chain,

[3] In fact, I argue in Bošković 2002a that the traditional EPP requirement does not hold of raising (and exceptional case-marking (ECM)) infinitival Is in English, which leaves the MCLP as the sole driving force for successive-cyclic movement via raising infinitival Spec,IPs. (Chomsky (in press) also hints at this analysis.)

not formation of chain links, must have a feature-checking motivation. In fact, all relevant syntactic conditions—for example, the Cycle—are stated with respect to the Form Chain operation, not formation of chain links. Thus, under the MCLP analysis, *what* in (1) does not even start moving until the final target of movement, the interrogative C, which provides a feature-checking motivation for the movement, enters the structure. At this point, *what* starts moving. The MCLP forces formation of intermediate chain links, such as the one created by the movement through the intermediate Spec,CP (I ignore here other intermediate landing sites). Last Resort is satisfied since the formation of the whole chain, whose head is located in the matrix Spec,CP, has a feature-checking motivation. Since the whole chain extends the tree (the final landing site is at the top of the tree), the Extension Condition (i.e., the Cycle) is also met.

Chomsky (1995b) dispenses with Form Chain. As a result, formation of each chain link has to satisfy Last Resort and the Cycle. With respect to (1), this means that movement of *what* to the intermediate Spec,CP has to involve feature checking; otherwise, Last Resort would be violated. It also has to extend the tree, which means that it has to happen before higher structure is built. In other words, unlike what happens in the MCLP analysis, *what* now moves to the Spec of *that* before the matrix C enters the structure.

Chomsky (2000) preserves the gist of this analysis. His analysis is based on the notion of *phase*, which is similar to the preminimalist notion of *bounding node*. The basic idea is that XP can move out of a phase only if it first moves to the Spec of the phase. This restriction is due to the PIC, which says that only the head and the Spec of a phase are accessible for movement to a position outside the phase. This movement is instantiated by giving the head of the phase the EPP property, which is satisfied by filling the Spec position. The EPP then drives movement to the Spec of the phase. After the movement, the element located in the Spec of the phase is accessible for movement out of the phase. Regarding complementizer *that*, Chomsky assumes that CPs are phases and that *that* may, but need not, have the EPP property. (3) instantiates the no-EPP-property option. As for (1), although in principle *that* need not have the EPP property, the no-EPP option for *that* is ruled out by the PIC.[4] Since CP is a phase, it is necessary to move *what* in (1) to the embedded Spec,CP so that it can later be moved out of the CP. This is accomplished by giving *that* the EPP property. If *that* were not given the EPP property, *what* would not move to the embedded Spec,CP, as a result of which it could not move out of the embedded CP because of the PIC. Note also that Chomsky (2000, 2001) assumes that Agree is a component of the operation Move driven by the EPP property. More precisely, movement of X to Spec,YP is preceded by establishment of an Agree (i.e., feature-checking) relation between Y and X. This means that in Chomsky's (2000) system, all movement, including movement to the Spec of intermediate heads like *that* in (1), has to involve feature checking. (I will refer to the analyses in Chomsky 1995b and 2000 as the *feature-checking analyses* of successive-cyclic movement.)

Example (4) raises a potentially serious problem for the phase analysis, which, in contrast to the MCLP analysis, ties successive-cyclic movement to a property of intermediate heads,

[4] In what follows, I ignore vP as a phase for ease of exposition (see also footnote 15).

considering each step of successive-cyclic movement a separate operation. (As noted above, the MCLP analysis divorces movement through intermediate Spec,CPs from C; that is, it considers it to result not from a property of C but from the movement itself, and it does not consider each step of successive-cyclic movement a separate operation.) Since the phase analysis ties successive-cyclic movement to a property of intermediate heads, it is difficult in this system to rule out (4) in a principled way given the derivation on which we choose the EPP option for *that*, which results in movement of *what* to the embedded Spec,CP, just as it does in (1). (Notice that we cannot appeal to the Doubly Filled Comp Filter, since nothing changes if *that* is replaced by a null C, as in **Who thinks what Mary bought?*) Recall that (4) is easily ruled out under the MCLP analysis, which does not tie successive-cyclic movement to a property of intermediate heads. (4) can in fact be interpreted as providing evidence that movement through intermediate Specs should not be tied to a property of intermediate heads.

There is a suggestion in Chomsky 2000:109, more fully worked out in Chomsky 2001:34–35, that has the effect of making movement to the Spec of a phase head that does not obligatorily have the EPP property essentially independent in terms of the driving force from the phase head itself even in a phase-based locality system. The suggestion is to make the assignment of an EPP property to nontrue EPP heads (i.e., heads that do not always require a Spec) conditional on its being required to permit successive-cyclic movement. The embedded-clause head in (1) can then be assigned the EPP property, since the assignment is necessary to allow successive-cyclic movement. On the other hand, the embedded-clause heads in (3) and (4) cannot be assigned the EPP property, since the assignment is not necessary to allow successive-cyclic movement. Under this analysis, movement through the Spec of a nontrue EPP phase head is really a reflex of successive-cyclic movement, just as in the MCLP analysis. The phase head is essentially a bystander. By itself, it cannot induce movement to its Spec, hence the ungrammaticality of (4).

The obvious problem for this analysis is lookahead. Both (1) and (4) at one point have the structure in (6).

(6) $[_{CP}$ what$_i$ $[_{C'}$ that Mary bought t$_i$]]

To drive movement to Spec,CP, *that* has to be assigned the EPP feature at the point where the embedded clause is built. But at that point we do not know whether assignment of the EPP feature will be needed to make successive-cyclic movement possible. We will know this only after the structure is expanded further. If the structure is expanded as in (4), it will not be needed, hence not be allowed, and if the structure is expanded as in (1), it will be needed, hence allowed. In other words, at the point that structure building has reached in (6) we need to know what is going to happen in the matrix clause.

This lookahead raises a conceptual problem for the analysis. As discussed above, the problem does not arise under the MCLP analysis. However, it must be pointed out that the very fact that the MCLP analysis requires adopting Form Chain, while both the phase analysis and Chomsky's (1995b) analysis allow its elimination, provides a conceptual argument in favor of the latter analyses. The MCLP's reliance on late successive-cyclic movement also necessitates certain complications with respect to the Cycle that do not arise under the latter analyses, which adopt early

successive-cyclic movement (for additional conceptual arguments against the MCLP, see Epstein and Seely 2006).

On the more empirical side, it is worth pointing out an argument against the MCLP analysis noted by Cedric Boeckx (pers. comm.), based on quantifier float constructions like (7) from West Ulster English, which allows quantifier float under *wh*-movement.

(7) What_i did he say $[_{CP}$ [all $t_i]_j$ that he wanted $t_j]$?
(McCloskey 2000)

Under Sportiche's (1988) stranding analysis of quantifier float, which, as discussed by McCloskey (2000), has to be adopted in order to account for quantifier float in West Ulster English, quantifier float in (7) breaks chain formation in an intermediate position (declarative Spec,CP), which under the MCLP analysis cannot trigger Form Chain for reasons discussed above with respect to (4).[5]

Putting aside the lookahead problem and the quantifier float data, recall that an important distinction between the Chomsky (1995b)/(2000) analyses and the MCLP analysis is that the former, but not the latter, requires feature checking in intermediate positions. That is, under the former analyses, but not under the latter analysis, the *wh*-phrase and the complementizer *that* in (1) have to undergo feature checking. Boeckx (2003b) and I (Bošković 2002a), arguing for a return to the MCLP analysis (see also Chomsky, in press), provide a number of arguments against feature checking in intermediate positions. Both Boeckx and I provide evidence to this effect regarding Ā-movement, and I also provide such evidence regarding A-movement. I refer the reader to these works for more detailed discussion and additional arguments against feature checking in intermediate positions; here I will merely summarize several arguments from Bošković 2002a, adding two new ones. I will also argue that successive-cyclic A- and Ā-movement should receive a uniform account, which means that whatever analysis is adopted for one of these types of movement should also hold for the other type.

3 No Feature Checking in Intermediate Spec,CPs and Spec,IPs

3.1 Ellipsis

One argument for the lack of feature checking in intermediate Spec,CPs targeted by successive-cyclic *wh*-movement concerns licensing of ellipsis.[6]

Lobeck (1990) and Saito and Murasugi (1990) note that functional heads can license ellipsis of their complement only when they undergo specifier-head agreement (SHA), that is, feature checking. Thus, (8) shows that tensed I, '*s*, and [+wh] C—which according to Fukui and Speas

[5] Under the account of quantifier float in Bošković 2004a, *all* would actually adjoin to the DP *what* at the point when the DP moves to the embedded Spec,CP, again breaking chain formation. Note that in the system developed below, (7) can easily be handled in a way consistent with that account.

[6] I will state the argument in terms of Chomsky's (1995b) system, which relies on specifier-head agreement, but the argument also extends to Chomsky's (2000) system.

(1986) undergo SHA—license ellipsis, whereas the nonagreeing functional heads *the* and *that* do not.[7]

(8) a. John liked Mary and [$_{IP}$ Peter$_i$ [$_{I'}$ did ~~t_i like Mary~~]] too.
b. John's talk about the economy was interesting but [$_{DP}$ Bill [$_{D'}$'s ~~talk about the economy~~]] was boring.
c. *A single student came to the class because [$_{DP}$[$_{D'}$ the ~~student~~]] thought that it was important.
d. John met someone but I don't know [$_{CP}$ who$_i$ [$_{C'}$ C ~~John met t_i~~]].
e. *John believes C/that Peter met someone but I don't think [$_{CP}$[$_{C'}$ C/that ~~Peter met someone~~]].

Significantly, as noted in Bošković 1997b, intermediate C cannot license ellipsis of its IP complement.

(9) a. *John met someone but I don't know who$_i$ Peter said [$_{CP}$ t$_i$ [$_{C'}$ C/that ~~John met t_i~~]].
b. *I know who Mary said C/that John met, but I don't know who$_i$ Peter said [$_{CP}$ t$_i$ [$_{C'}$ C/that ~~John met t_i~~]].

This can readily be accounted for if passing through an intermediate Spec,CP does not imply feature checking (i.e., SHA) with the C. The ungrammaticality of (9a–b) should then be taken as evidence against the feature-checking view of successive-cyclic movement, on which C/*that* would undergo SHA in these examples. Under this view, (9a–b) are incorrectly expected to pattern with (8d) rather than (8e).[8] This is not the case under the MCLP analysis, where *who* passes through the Spec of C/*that*, but does not undergo any feature checking with *C/that*, the movement being driven by the need to minimize chain links.

Notice that in Chomsky's (2000) system, the SHA requirement on ellipsis would be restated as an EPP requirement. The data under consideration thus also provide evidence against Chomsky's (2000) system. In this system, (9a–b) are incorrectly predicted to be acceptable since the declarative complementizer C/*that* takes a Spec.

Note also that the feature-checking approach to successive-cyclic movement forces on us a rather strange assumption that in constructions like *What do you think that Mary bought?*, the *wh*-phrase, a [+wh] element, undergoes SHA with the declarative complementizer *that*, which is specified as [−wh] (see Lasnik and Saito 1992).[9] The assumption is not necessary under Takahashi's (1994) approach to successive-cyclic movement, where the movement to the intermediate Spec,CP is forced by the MCLP, not a feature-checking requirement, and therefore no

[7] Note that here I am not adopting Lobeck's (1995) analysis of ellipsis; for example, I do not postulate pro in the place of the ellipsis site.

[8] Appealing to the copy theory of movement will not help here. In fact, the relevant C in all the constructions under consideration would undergo SHA with the head of the *wh*-phrase chain since SHA would take place before the root-clause structure is built.

[9] A similar problem also arises in Chomsky's (2000) system, given that in that system Agree is a component of the EPP-driven operation Move.

SHA between the *wh*-phrase and *that* has to take place in the construction in question. This should be interpreted as another argument for the superiority of the MCLP approach over the feature-checking approach to successive-cyclic movement.[10]

Returning to ellipsis, the ellipsis argument discussed above can be extended to noncontrol infinitival Is. As discussed by Martin (1996, 2001) (see also Koizumi 1995, Bošković 1997b, Epstein and Seely 1999, 2006), VP-ellipsis is also possible in control infinitives, which is expected under the case-theoretic approach to the distribution of PRO, on which PRO in (10a–b) is checked for null case by the infinitival I, *to*, hence must undergo SHA with *to*.

(10) a. John was not sure he could leave, but he tried [$_{IP}$ PRO$_i$ [$_{I'}$ to ~~t_i *leave*~~]].
b. Mary wanted to be available, but she didn't really try [$_{IP}$ PRO$_i$ [$_{I'}$ to ~~*be* t_i *available*~~]].

Significantly, the authors just mentioned observe that VP-ellipsis is not possible in exceptional-case-marking (ECM) infinitives, which many researchers have argued to involve overt object shift (i.e., overt movement to Spec,Agr$_O$P/Spec,vP), an assumption that I also adopt here (for arguments for overt object shift and relevant references, see section 6.2.2; see also (12) and (31)).[11]

(11) a. *John believed Mary to be available but I don't believe
[$_{Agr_OP}$ her$_i$ [$_{IP}$ t$_i$ [$_{I'}$ to ~~*be* t_i *available*~~]]].
b. *John believed Mary to know French but I don't believe
[$_{Agr_OP}$ her$_i$ [$_{IP}$ t$_i$ [$_{I'}$ to ~~t_i *know French*~~]]].

Under the overt object shift analysis, *her* in (11) moves to the matrix Spec,Agr$_O$P/Spec,vP, passing through the infinitival Spec,IP. In this connection, note the possibility of quantifier float in (12), which, as discussed in Bošković 1997b, under Sportiche's (1988) analysis of quantifier float

[10] The question arises how to handle languages that are assumed to have intermediate *wh*-agreement, that is, overt reflexes of agreement between intermediate heads and *wh*-phrases. As Boeckx (2003b, 2004) points out, it is actually far from clear that there are any languages that have true intermediate *wh*-agreement. As Boeckx notes, as well as Chung and Georgopoulos (1988), Georgopoulos (1991), and Chung (1998), in many languages that are traditionally considered to have such agreement, *wh*-agreement is only indirect. Thus, in a number of languages *wh*-movement triggers a morphological change on intermediate verbs and/or intermediate complementizers. However, the change does not reflect any direct relation between a *wh*-phrase and the verbs or the complementizers. Rather, it reflects a distinct agreement relation holding between the verbs and the intermediate complementizers. In other words, instead of a *wh*-phrase directly agreeing with an intermediate head, in these languages *wh*-movement induces special agreement between intermediate verbs and intermediate complementizers. For comprehensive analyses of traditional *wh*-agreement that does not involve feature checking between intermediate Cs and *wh*-phrases, which include more recalcitrant cases like Kinande, see Bošković, in press b, as well as Boeckx 2004. (Schneider-Zioga (2005) in fact gives conclusive evidence that what is traditionally considered to involve long-distance successive-cyclic *wh*-movement with agreeing intermediate complementizers in Kinande does not involve *wh*-movement at all. Her argument is based on a complete lack of reconstruction effects with the fronted *wh*-phrase, which indicates that the *wh*-phrase does not undergo movement in such constructions, hence cannot be probed (for agreement) by the intermediate C. See Bošković, in press b, for discussion of the Kinande paradigm within the system developed here.)

[11] Although the contrast between ECM and control infinitives may not be completely clear, for the majority of speakers there is a significant difference in the availability of ellipsis between the two, which needs to be accounted for (see Martin 2001:154).

indicates that the ECM subject indeed moves overtly to the matrix clause, passing through the infinitival Spec,IP.

(12) I believe the students [$_{IP}$ [all t] [$_{I'}$ to [t know French]]].

Returning to (11), Epstein and Seely (1999:81) interpret the ungrammaticality of the construction as indicating that, in contrast to *to* in (10), *to* in (11) does not undergo SHA. This in turn provides evidence that *her* does not undergo feature checking in the intermediate Spec,IP. As argued in Bošković 2002a (see footnote 3 above), like the movement of *what* through the intermediate Spec,CP in (9), movement of *her* through the infinitival Spec,IP in (11) is forced by the MCLP, not a feature-checking requirement. As a result, no SHA with *to* takes place in (11) even though *her* passes through the embedded Spec,IP.[12]

3.2 On the ''Defectiveness'' of Intermediate Heads

Chomsky (2000, 2001) develops a feature-checking system that schematically functions as follows (*i* indicates an interpretable feature, *u* an uninterpretable feature):

(13)

X (probe)	Y(goal)
uF	iF
EPP	uK

Chomsky adopts the Activation Condition (AC), according to which an element Y must have an uninterpretable feature to be visible for movement.[13] X and Y in (13) are involved in an F-feature-checking relation, and as a reflex of that relation, the uninterpretable feature K (uK) of Y is checked, which happens after movement of Y to Spec,XP. The workings of the system are illustrated in (14), where under Chomsky's (2000) analysis, C and *what* are involved in a [+wh]-feature-checking relation, and the uninterpretable Q-feature, which made the *wh*-phrase visible for the primary feature-checking relation and movement to Spec,CP, is checked as a reflex of the primary feature-checking relation.[14]

[12] It is worth noting here that, following Lasnik and Saito (1992), Martin (1996, 2001) argues convincingly that some traditional raising predicates have control variants. As expected given the discussion of (10), the control variants, whose infinitival complement's Spec,IP is filled by PRO, allow VP-ellipsis. See Martin 1996, 2001:159–163, for convincing arguments that (i), where VP-ellipsis is allowed, instantiates the control variant. Where the control option is ruled out, as in (ii) (expletive *there* cannot control PRO), VP-ellipsis is disallowed, as expected given the discussion in the text.

(i) Kim may not leave, but Sarah is likely to ~~*leave*~~.

(ii) *It was announced that there may be a riot, so everyone believes there is likely to ~~*be a riot*~~.

[13] For Chomsky, the AC also holds for Agree, though this is not relevant to the examples discussed in this section. (The AC is discussed in more detail in section 4.)

[14] The analysis given here is in a slightly modified form from Bošković 2005c, where independent evidence is presented that the AC holds for *wh*-movement (in fact, all Ā-movement)—that is, evidence is presented for the existence of an uninterpretable feature of *wh*-phrases that is checked after *wh*-movement in (14) (see also Watanabe 2002).

(14) I wonder what$_i$ C Mary bought t$_i$.
i*wh* ~~u*wh*~~
~~uQ~~ ~~EPP~~

The existence of successive-cyclic movement has forced Chomsky (2000, 2001) to complicate the feature-checking system by adopting the concept of defective heads, which are defective with respect to feature checking in that they are unable to check the feature of the goal that has made the goal visible for agreement and movement to the head in question. Intermediate C in (15a) is an example of a defective head; the relevant checking operations would look something like (15b).

(15) a. What$_i$ do you think [$_{CP}$ t$_i$ that Mary bought t$_i$]?
b. you think [$_{CP}$ what$_i$ that Mary bought t$_i$]
i*wh* ~~u*wh*~~
uQ ~~EPP~~

For Chomsky, *that* in (15) undergoes feature checking with the *wh*-phrase and the *wh*-phrase moves to its Spec, which is exactly what also happens with the embedded C and the *wh*-phrase in (14). The difference is that *that* is defective in that it cannot check the Q-feature of the *wh*-phrase, so the *wh*-phrase is still active for movement and agreement.[15] Notice now that under the MCLP approach to successive-cyclic movement, it is not necessary to stipulate the defectiveness of intermediate heads with respect to feature checking since such heads are not involved in feature-checking relations in the first place. In other words, if there is no feature checking with intermediate heads during successive-cyclic movement, we do not need to assume that intermediate heads are defective in that they are unable to check the uninterpretable feature that has made their goal visible for agreement with, and movement to, the head in question. We can then make the process of feature checking completely uniform in that all probes delete the uninterpretable feature of the goal that has made the goal active for entering into a relation with the probe; the concept of heads that are defective with respect to feature checking in the relevant sense can be eliminated.

It is also worth noting that Chomsky (2000) assumes that raising I (the embedded I in (16)) is defective with respect to feature checking, just like *that* in (15).

(16) Mary$_i$ seems [$_{IP}$ t$_i$ to know t$_i$ French].

The reader can verify that the point made above with respect to *that* easily extends to the raising I since under the MCLP approach to successive-cyclic movement, raising I is not involved in

[15] Note that if a [+wh] C is merged in the matrix clause of (15b), if there are no phases between the matrix C and the *wh*-phrase in the embedded Spec,CP, the [+wh] C will be able to check the uQ feature of *what* (even if another *wh*-phrase is present in the matrix clause, given Hiraiwa's (2001) Multiple Agree, adopted in Chomsky 2004). If there is a vP phase in the matrix clause, the matrix C will not be able to check the uQ feature of *what* in the embedded Spec,CP. We may then be able to rule out constructions where *what* remains in an intermediate Spec,CP. This, however, does not resolve the issue of how to handle *wh*-phrases that stay in intermediate Specs. The problem now arises with respect to the derivation in which *what* moves to the matrix Spec,vP, where it is accessible for feature checking to the matrix C, and stays there. To simplify the discussion, I am ignoring vP as a phase throughout sections 2 and 3. However, the reader should bear this discussion in mind if the vP phase is brought into the relevant derivations.

feature checking in the first place. The unified treatment of intermediate C and intermediate I in this respect is in the spirit of a uniform analysis of successive-cyclic A- and Ā-movement argued for in the next section.

3.3 Existential Constructions and the Parallelism between Successive-Cyclic A- and Ā-Movement

We have seen three arguments against feature checking in intermediate positions of *wh*-movement (more precisely, intermediate Spec,CPs), based on ellipsis, feature incompatibility between *wh*-phrases and declarative complementizers, and putative defectiveness of intermediate Cs, as well as two arguments against feature checking in intermediate positions of A-movement (i.e., intermediate Spec,IPs), based on ellipsis and the defectiveness of intermediate I.

Additional (and the strongest) evidence against feature checking in intermediate Spec,IPs (as well as the standard assumption that the traditional EPP holds of the raising infinitival I) is provided by existential constructions. Consider the data in (17).

(17) a. There seems to be a man in the garden.
b. *There seems a man$_i$ to be t$_i$ in the garden.

If there is a feature-checking requirement on the intermediate infinitival I, why can't the requirement be checked by the movement of the indefinite? Chomsky (1995b) gives an account of (17) that assumes the EPP as a feature-checking requirement. The account is based on the Merge-over-Move preference. According to Chomsky, at the point when the embedded clause is built we need to insert something into the infinitival Spec,IP in order to satisfy the EPP. With regard to (17), there are two possibilities: either we can insert *there*, which is present in the numeration, into Spec,IP or we can move the indefinite to this position. Chomsky argues that lexical insertion is a simpler operation than movement. Therefore, expletive insertion into the embedded Spec,IP, which on Chomsky's account takes place in (17a), blocks indefinite movement to the embedded Spec,IP, which takes place in (17b). There are several problems with the Merge-over-Move account, however (Epstein and Seely 1999, 2006, Grohmann, Drury, and Castillo 2000, Bošković 2002a). Consider first the construction in (18) from Grohmann, Drury, and Castillo 2000, attributed to Juan Romero and Alec Marantz (see also Epstein and Seely 1999, Frampton and Gutmann 1999, Nunes and Uriagereka 2000), where the indefinite has apparently moved to Spec,IP although an expletive was available for lexical insertion.

(18) There was a rumor that a man$_i$ was t$_i$ in the room.

To deal with this type of construction, Chomsky (2000) introduces the concept of subnumeration, defined on phases. More precisely, Chomsky proposes that each phase has its own subnumeration. Since the expletive is not present in the subnumeration corresponding to the embedded clause (recall that CPs are phases), the option of expletive insertion is not available.

A serious problem for this analysis is raised by (19).

(19) a. There has been a book$_i$ put t$_i$ on the table.
b. *There has been put a book on the table.

Lasnik (1995) argues that the indefinite in (19a) moves overtly to satisfy the EPP.[16] Under Chomsky's definition of phase, the constructions in (19) contain only one phase (passive VP is not a phase under Chomsky's definition). As a result, the expletive should be available for lexical insertion at the point when the indefinite undergoes movement in (19a). Given the Merge-over-Move preference, the possibility of expletive insertion should block indefinite movement. As a result, (19b) should block (19a) (i.e., (19b) should be grammatical and (19a) ungrammatical).

Now consider (20).

(20) Mary believes John_i to t_i know French.

At the point when the embedded clause is built in (20), there are two possibilities for satisfying the EPP: we can either move *John* or merge *Mary* into the infinitival Spec,IP. Given the Merge-over-Move preference, the latter should block the former. As a result, we cannot derive (20). Chomsky (1995a) observes that the derivation on which *Mary* is introduced into the embedded Spec,IP eventually violates the θ-Criterion (under his assumptions; see Nunes 2004 for another problem). However, we need lookahead to take advantage of this to rule out the derivation in question. To avoid lookahead, Chomsky (2000) proposes the condition that arguments can be merged only in θ-positions. This condition blocks the unwanted derivation for (20) without lookahead. However, Epstein and Seely (1999:48–50) point out several problems with this condition. For one thing, it is massively redundant. For example, it unnecessarily rules out (21), which is plausibly already ruled out because it is uninterpretable, that is, because the presence of *John* violates Full Interpretation. (In other words, the condition in question redundantly rules out all constructions that violate the θ-Criterion requirement that an argument be assigned a θ-role.)

(21) *John seems that Peter likes Mary.

Because of these problems, several of the authors mentioned earlier argue that the Merge-over-Move preference should be abandoned (see Epstein and Seely 1999, 2006, Grohmann, Drury, and Castillo 2000, Bošković 2002a).[17] If the preference is abandoned, the question arises how the data in (17), especially the ungrammaticality of (17b), can be accounted for. Notice, however, that (17b) raises a problem only if there is an EPP—or, more generally, a feature-checking requirement holding of the infinitival I. If there isn't, the ungrammaticality of (17b) can easily be accounted for: there is no reason to move the indefinite to the embedded Spec,IP; hence, the movement is blocked by Last Resort. However, note that, as indicated by the possibility of

[16] Under the partitive case hypothesis and assuming overt object shift, the indefinite may be located in its case-checking position (Spec,AgrP) overtly (see footnote 65). In the system developed in section 6, the movement would be driven by case considerations.

[17] It is worth noting here that the Merge-over-Move account of (17b) (more precisely, the contrast between (17b) and (18)) constitutes the strongest argument for not treating raising infinitives like phases, a possibility that may become viable with the elimination of the strongest argument against it. The reader should bear this in mind during the discussion below.

quantifier float in (22), movement to a higher, finite Spec,IP still proceeds via intermediate infinitival Spec,IPs.[18]

(22) The students seem [$_{IP}$ all to know French].

However, as the discussion of (2) showed, this can be accomplished without a feature-checking relation with an intermediate head. In other words, we are dealing here with successive-cyclic movement that does not involve feature checking with the intermediate head.

Under the above analysis, intermediate Is are treated like intermediate Cs. This means that both intermediate Spec,CPs and intermediate Spec,IPs are filled only when an element generated in a lower position moves to a higher Spec,CP/Spec,IP. Such an element must move via intermediate Spec,CPs/Spec,IPs as a result of successive-cyclic movement. This is the case in (23) and (25). However, when this condition is not met, intermediate Spec,CPs/Spec,IPs are not created. This is illustrated in (24) for intermediate C. Regarding intermediate I, as argued in Bošković 2002a, this is the case with traditional expletive-raising constructions (26), where intermediate Spec,IPs are not filled.

(23) What$_i$ do you think [$_{CP}$ t$_i$ that John bought t$_i$]?

(24) You think [$_{CP}$ that John bought a house].

(25) Someone$_i$ is likely [$_{IP}$ t$_i$ to be t$_i$ in the garden].

(26) There is likely [$_{IP}$ to be someone in the garden].

Under the standard analysis, intermediate Cs/Spec,CPs and intermediate Is/Spec,IPs are treated differently: while intermediate Spec,CPs are assumed to be created only when successive-cyclic movement requires it, intermediate (i.e., raising) Is are standardly assumed to always have a filled

[18] See Bošković 2002a and references therein for additional evidence to this effect. Here, I summarize one argument based on (ia–b). (The data, attributed to Danny Fox, are taken from Grohmann, Drury, and Castillo 2000. See also Epstein and Seely 2006 for a different perspective on the paradigm.)

(i) a. Mary seems to John [$_{IP}$ to appear to herself to be in the room].
b. *Mary seems to John [$_{IP}$ to appear to himself to be in the room].

Whereas in (ia) the anaphor can take a matrix-clause NP as its antecedent, in (ib) this is impossible. Why is the anaphor in (ib) unable to take the experiencer as its antecedent? (Note that, as is well known, the experiencer NP can c-command/bind outside the experiencer PP.) The ungrammaticality of (ib) immediately follows if the matrix subject passes—in fact, must pass—through the embedded-clause Spec,IP on its way to the matrix Spec,IP. (ib) then exhibits a Specified Subject Condition effect. The experiencer is attempting to bind the anaphor across a closer binder, namely, the trace in Spec,IP (see (iib)). The problem does not arise in (ia), where the anaphor is bound by the closest subject (see (iia)).

(ii) a. Mary$_i$ seems to John [$_{IP}$ t$_i$ to appear to herself$_i$ to be in the room].
b. *Mary$_j$ seems to John$_i$ [$_{IP}$ t$_j$ to appear to himself$_i$ to be in the room].

It is worth noting here that Epstein and Seely (2006) observe that (iii) is better than (ib).

(iii) It seems to John to appear to himself that Mary is in the room.

This is in fact expected under the proposals made below and in Bošković 2002a, where I argue that traditional expletive-raising constructions do not involve raising at all, the expletive being generated directly in its surface position. Under this analysis, the Spec,IP of the infinitive embedded under *seem* is not filled in (iii), unlike in (ib). As a result, not having a subject, the infinitive does not ''close'' the binding domain in (iii), unlike in (ib). The contrast in question can then be interpreted as an additional argument for the expletives-don't-move hypothesis put forward in Bošković 2002a (see also the discussion below).

Spec—that is, to always be subject to the filled-Spec requirement (the EPP). Under the above analysis, this is not the case. Under this analysis, intermediate Cs/Spec,CPs and intermediate Is/Spec,IPs are treated the same way in all relevant respects: with both intermediate Cs and intermediate Is, the Spec position is filled only when successive-cyclic movement forces its presence; otherwise, it remains empty. (25) is then the IP counterpart of (23), and (26) is the IP counterpart of (24).[19] In Bošković 2002a, I give a number of empirical arguments that the intermediate Spec,IP in expletive constructions like (26) is indeed not created (see also footnote 18), which means that the expletive is generated in its surface position, without undergoing raising from the infinitival Spec,IP. In fact, I argue that this is quite generally the case in traditional expletive-raising constructions: the expletive never undergoes movement in such constructions, being generated directly in its surface position. As shown in Bošković 2002a, locality violations with A-movement are routinely voided in expletive-raising constructions, which immediately follows if expletives do not undergo raising in such constructions: there is no locality violation because there is no movement. One relevant example concerns the experiencer-blocking effect in French (see Bošković 2002a for a number of additional arguments).

As discussed in Chomsky 1995b:305 and McGinnis 1998a,b, like many other languages, French disallows raising across an experiencer. This is illustrated in (27).

(27) a. *Deux soldats semblent au général être arrivés en ville.
two soldiers seem to.the general to.be arrived in town
'Two soldiers seem to the general to have arrived in town.'

b. *Deux soldats semblent au général manquer/être manquants à la caserne.
two soldiers seem to.the general to.miss/to.be missing at the barracks
'Two soldiers seem to the general to be missing from the barracks.'

According to Chomsky and McGinnis, what we are dealing with in (27) is a violation of locality restrictions on movement, more precisely, Relativized Minimality. The constructions involve A-movement (i.e., movement to an A-Spec) across an A-Spec.[20]

Significantly, the expletive counterparts of (27) are acceptable, as shown in (28).

(28) a. Il semble au général être arrivé deux soldats en ville.
there seems to.the general to.be arrived two soldiers in town
'There seem to the general to have arrived two soldiers in town.'

b. Il semble au général y avoir deux soldats manquants à la caserne.
there seems to.the general to.have two soldiers missing at the barracks
'There seem to the general to be two soldiers missing from the barracks.'

[19] See McGinnis 2004 for another case of successive-cyclic A-movement where the intermediate step is merely a reflex of successive-cyclic movement. (The movement in question involves passivization out of high applicatives. McGinnis applies the phase analysis to the case in question, arguing that high applicatives are phases. Later in this section, I show that a similar analysis is applicable to ECM and raising infinitives.)

[20] See the above references as well as Torrego 1996, Boeckx 2000b, Stepanov 2002, and Collins 2005, among others, for discussion of why the English counterparts of (27) are acceptable.

There is an obvious, principled account of the contrast between (27) and (28): unlike (27a–b), (28a–b) do not involve A-movement across an A-Spec. In other words, unlike the matrix subject in (27a–b), the matrix subject in (28a–b)—namely, the expletive—does not move into the matrix clause from inside the infinitive. Rather, the expletive is generated in its surface position. As a result, it does not cross the experiencer; hence, its presence does not induce a locality violation. (As discussed in Bošković 2002a, Icelandic behaves like French with respect to (27) and (28).)[21] The contrast between (27) and (28) (more precisely, the absence of a locality violation in (28)) provides strong evidence that expletives do not move, which in turn provides evidence against the EPP. The infinitival subject position remains unfilled (i.e., it is not created) in the expletive constructions in (28).

Interestingly, the quasi-argument expletive displays the experiencer-blocking effect.

(29) ?*Il semble au général avoir plu.
there seems to.the general to.have rained
'It seems to the general to have rained.'

This is not surprising. Under the quasi-argument hypothesis, *il* is actually θ-marked by *plu* in (29). As a result, it must be generated within the infinitive, which means that it undergoes movement to the matrix Spec,IP across the experiencer, hence the contrast with (28). The contrast between (28) and (29) thus confirms the quasi-argument hypothesis. It also confirms that only elements that are θ-marked in a position lower than the experiencer are subject to the experiencer-blocking effect. The lack of a locality violation with the true expletive in turn provides evidence that expletives indeed do not undergo A-raising from Spec,IP, which means that intermediate Spec,IPs in traditional expletive-raising constructions are not created (i.e., the EPP does not hold of intermediate Is).[22] This confirms the parallelism between intermediate IPs and intermediate CPs, illustrated in (23)/(24) and (25)/(26).

It is also worth noting that Ormazabal (1995) and Epstein and Seely (2006) argue that all raising and ECM infinitives, referred to below as propositional infinitives, are CPs. (Pesetsky (1992) also suggests this analysis; and Tanaka (2002), who discusses only ECM infinitives, argues that ECM infinitives are CPs.) Under this analysis, the intermediate clause-edge landing site of propositional infinitives may actually be Spec,CP rather than Spec,IP, in which case successive-

[21] For discussion of an interfering factor that arises in Spanish, see Bošković 2002a.

[22] This also has to be the case in Chomsky's (2000) system. Although Chomsky does not explicitly point this out, expletives are actually immobile in his system, which means that this system is essentially forced to accept the conclusion that expletives do not undergo A-raising. Consider (i), which is the structure of *There seems (to John) to be someone in the garden* before the matrix clause is built. The expletive is inserted into the embedded-clause Spec,IP to satisfy the EPP, which Chomsky assumes holds of the raising infinitival I.

(i) there to be someone in the garden

According to Chomsky, expletive *there*, which has an uninterpretable person feature, serves as a probe. The expletive should serve as a probe in (i), probing the material in the infinitival clause (in fact, this has to happen before new elements of the lexical subarray are accessed; see Chomsky 2000:132). As a result of this, its uninterpretable person feature will be deleted. Given the AC, once *there* checks its uninterpretable person feature, it is inaccessible for movement. *There* then cannot move to the matrix clause. *There* is thus essentially rendered immobile in Chomsky's (2000) system.

cyclic *wh*-movement and successive-cyclic NP-movement would be completely parallel. The intermediate trace in (25) would then be located in Spec,CP, just as in (23).[23]

(30) Someone$_i$ is likely [$_{CP}$ t$_i$ [$_{C'}$ to be t$_i$ in the garden]].

Notice also that in the current phase system, Spec,CP would not always have to be treated like an Ā-position when it is a landing site of successive-cyclic movement, just as Spec,vP is not always treated as an A-position when it is a landing site of successive-cyclic movement. In the phase-based system, any movement out of vP has to proceed via Spec,vP (in the case of multiple movement out of vP, multiple Specs of vP are created). It is tacitly assumed that the status of a Spec,vP with respect to the A/Ā distinction depends on the nature of the movement that passes through Spec,vP: if we are dealing with A-movement, the Spec,vP created by the movement counts as an A-position, and if we are dealing with Ā-movement (as in the case of, for example, *wh*-movement of adjuncts out of vP), the Spec,vP created by the movement counts as an Ā-position. The same reasoning can apply to movement out of CP, which would remove one potential impediment to the Spec,CP analysis of intermediate steps of NP-raising.[24]

Let us return now to the claim that propositional infinitives are CPs and that A-movement out of CPs is in principle possible, which is a prerequisite for the Spec,CP analysis of intermediate steps of NP-raising. For arguments supporting these claims, see Ormazabal 1995, Tanaka 2002, and Epstein and Seely 2006 (also Pesetsky 1992, a predecessor of these works). For additional evidence that A-movement out of CPs (in fact, both finite and nonfinite CPs) is in principle possible, see Nemoto 1991, 1993, Ura 1994, Richards 1999, McCloskey 2000, Rodrigues 2002, 2004, Ferreira 2004, Fujii 2005, and Fernández-Salgueiro 2005, 2006, among others. Here, I will note just two arguments from McCloskey 2000. The first argument concerns quantifier float. Consider the West Ulster English data in (31), where *all* is floated under *wh*-movement of *who*.

(31) a. Who did you expect your mother all to meet at the party?
b. *Who did you arrange for your mother all to meet at the party?

McCloskey shows that (31a) provides evidence for overt object shift. Assuming that the infinitival subject *your mother* in (31a) moves overtly to the higher clause for case checking, there is space for the quantifier *all* to be stranded preceding *to*. This is impossible in (31b), where the infinitival

[23] The idea that successive-cyclic A-movement targets Spec,CPs grew out of a discussion with Sam Epstein, Daniel Seely, and Acrisio Pires. A somewhat similar analysis is proposed for ECM infinitives by Tanaka (2002), who argues that overt object shift out of an ECM infinitive proceeds via CP-adjunction (the CP being the infinitive).

[24] The status of the A/Ā distinction is actually not clear in the current, feature-based theoretical system, where in many cases it is no longer needed. (For example, in the current theory Relativized Minimality is no longer relativized with respect to the A/Ā distinction; rather, it is relativized with respect to the actual features involved.) The stipulatory nature of the distinction is also obviously problematic conceptually. Eliminating it would clearly be theoretically desirable (for different attempts to do that, see Abe 1993, Williams 2003; see also Chomsky 1995b, Bošković and Takahashi 1998). The same holds for the ''improper movement'' mechanism, which used to be invoked to block A-movement out of CPs. In other words, it is not at all clear from the current theoretical perspective that A-movement out of CPs should in principle be ruled out (or that it even could be). For empirical arguments that it shouldn't be, see the references and the data given directly below in the text.

subject is case-marked by *for* within the infinitive. Now, McCloskey argues that in long-distance extraction examples like (31a) and (32), the quantifier *all* is stranded in an intermediate Spec,CP.[25]

(32) What do you think (all) that he'll say (all) that we should buy?

The ECM infinitive in (31a) then must be a CP and the example must involve A-movement out of a CP.[26]

McCloskey (2000:71) also gives examples from various languages involving A-movement out of clauses that are clearly headed by an overt complementizer. One such example is Irish (33), involving A-raising across the negative complementizer *gan*. (See McCloskey 2000 and references therein for relevant discussion. For additional examples of this type from a number of languages, which quite convincingly show that A-movement out of CPs is in principle possible, see the references immediately above (31). In (34), I give just one Japanese example from Nemoto 1991, which involves A-movement across the CP headed by *to*.)

(33) N' fhéadfadh a cuid feola [$_{CP}$ gan t a bheith righin].
NEG could its portion flesh COMP NEG[−fin] be[−fin] tough
'Its flesh couldn't but be tough.'

(34) John to Bob$_i$-o otagai$_i$-no titioya$_j$-ga [$_{CP}$ PRO$_j$ t$_i$ rikaisiyoo to] kokoromita.
John and Bob-ACC each.other's fathers-NOM understand COMP attempted
'John and Bob, each other's fathers attempted to understand.'

To summarize, under the standard analysis, finite clauses on the path of successive-cyclic Ā-movement and propositional infinitives on the path of successive-cyclic A-movement are treated differently: while the former are assumed to host a Spec only when successive-cyclic movement requires it, the latter are standardly assumed to always be subject to the filled-Spec requirement (i.e., the EPP). However, we have seen evidence that the two should be treated alike with respect to their Spec position: the Spec position is filled only when successive-cyclic movement forces its presence; otherwise, it remains empty. I have also suggested that the parallelism between successive-cyclic Ā- and A-movement may even be stronger, with intermediate traces located in

[25] Given that the ECM subject is located in Spec,Agr$_O$P/Spec,vP and *to* heads the infinitive, another option would be to locate *all* somewhere in the vP/VP projection in (31a). However, McCloskey shows convincingly that the quantifier cannot be located in such a position; that is, he shows that *all* is stranded in Spec,CP in both (31a) and (32).

[26] Note also that under the Spec,CP analysis of successive-cyclic A-movement, the embedded CP in (31a) would have two Specs. In principle, this should not be a problem given that vP is standardly assumed not to block the possibility of multiple Specs. The option that CP can have multiple Specs is actually independently necessary for constructions like (ia), where both *wh*-movements should proceed via a Spec of the lowest CP.

Speakers who in principle allow extraction out of infinitival *wh*-islands find (ia) fully acceptable, and those for whom it is a bit degraded find (ia) a bit degraded. In other words, (ia) is not worse than (ib) for anyone. (For some reason, it actually seems better.) Note also that in principle, allowing multiple Specs even for English interrogative C in finite *wh*-islands would not incorrectly void the finite *wh*-island effect in English since, as shown in Bošković 2005c, movement of a *wh*-phrase through a filled interrogative Spec,CP in this context is independently ruled out.

(i) a. (?)On which table does John wonder what to tell Mary that she should put?
b. ??On which table does John wonder who to tell that Mary should put that book?

Spec,CP in both cases, a point that I believe is of some theoretical and empirical importance.[27] This then means that we should have a uniform account of successive-cyclic Ā- and A-movement; that is, the same analysis should hold for both of them. The modified phase analysis proposed in the next section can indeed be applied to both in exactly the same way.

The central point of this section is that there is no feature checking in intermediate positions of successive-cyclic movement, which again holds for both Ā- and A-movement. This means that we cannot accept Chomsky's (2000, 2001) theory of successive-cyclic movement, which relies on intermediate feature checking. The available alternative is Takahashi's (1994) approach, which does not use intermediate feature checking, but relies on the operation Form Chain, which is not needed under Chomsky's approach. In the following section, I will propose a new approach to successive-cyclic movement that seems to me to combine the best of both worlds: like Takahashi's approach, it does not rely on intermediate feature checking, and like Chomsky's approach, it does not rely on Form Chain.[28] As a result, it is not necessary to wait for the final target of movement to enter the structure before starting successive-cyclic movement (i.e., I will adopt early successive-cyclic movement), which will simplify the working of the Cycle. In this respect, the proposed theory will resemble Chomsky's approach and depart from Takahashi's. However, the kind of lookahead that Chomsky relies on to account for constructions like (4) will not be needed in the proposed theory. The theory will also turn out to have important consequences for Agree.[29]

4 The Activation Condition and Successive-Cyclic Movement: Deducing the Condition's Effects

At first sight, it may appear that although what we are trying to accomplish is conceptually and empirically desirable, it is simply impossible since it is based on mutually incompatible assumptions. To be more precise, it seems that if there is no feature checking in intermediate positions of successive-cyclic movement, we are forced to adopt Form Chain and late successive-cyclic movement. Otherwise, each step of successive-cyclic movement will count as a separate operation, which will violate Last Resort: given that there is no feature checking in intermediate positions and that no lookahead is allowed, intermediate steps simply will not do anything. However, I will show in this section that it is actually possible to combine the assumptions in question. Chomsky's (2000) Activation Condition (AC), which states that an element X has to have an uninterpretable feature to be visible for movement, will play a crucial role in my analysis.[30]

[27] Further exploration of this suggestion, which has far-reaching consequences, is left for future research.

[28] As a result, the problem that (7) raises for the MCLP analysis, discussed above, will not arise under the proposed analysis.

[29] Notice that I assume that covert dependencies involve Agree, as in Chomsky 2000, 2001; that is, I do not adopt Nissenbaum's (2000) and Chomsky's (2004) proposal that both overt and covert dependencies involve movement but differ in the timing of the transfer of its result to Spell-Out.

[30] For Chomsky, the AC also holds for Agree. However, I will argue below that Agree should not be constrained by the AC.

It is worth noting here that Nevins (2004) argues against the empirical validity of the AC. However, his central argument is based on a descriptive generalization concerning the scope of what he considers to be nonnominative subjects

According to Chomsky (2000, 2001), the role of the AC is to implement movement; that is, the AC is needed to make movement possible. It is not clear what Chomsky has in mind by ''implementation'' here. Consider the scenarios in (35) and (36). (Y in (35) does not have any uninterpretable features. uK is checked as a reflex of the F-feature-checking relation.)

(35)	W	Y
	uF	iF
	EPP	
(36)	W	Y
	uF	iF
	EPP	uK

The scenario in (36) conforms to the AC, and the one in (35) does not. It appears that (35) contains everything needed for X and Y to undergo feature checking and for Y to move to Spec,XP. The AC seems to bring in an additional assumption, departing from conceptual necessity. In other words, it is not clear why the AC is needed to implement movement. The relevant movement relation in (35) seems straightforwardly implementable without the AC.

In spite of this, I would like to pursue Chomsky's idea that the AC is needed to implement movement, but with an important modification that will be shown to resolve the conceptual problem noted above. To be more precise, I will use the AC only to implement successive-cyclic movement—in particular, movement that crosses phase boundaries.[31]

Consider the following scenario, where XP is a phase, and Y needs to undergo movement whose final landing site WP is outside XP (37). In this scenario, Y needs to undergo successive-cyclic movement to WP, via Spec,XP. In accordance with the AC, Y has an uninterpretable

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that can easily be restated in a manner consistent with the AC. (Moreover, Russian accusative subjects, one of his central cases, do not seem to be located in Spec,IP at all; see footnote 71 and Williams 2006.) In fact, I am not aware of any really conclusive arguments against the empirical validity of the AC, while the arguments for it are numerous and well known (see also the references given in footnote 14 regarding the AC and Ā-movement).

[31] Several recent works show that Chomsky's (2000, 2001) phase system, where only CP and vP are phases, is empirically inadequate owing to the paucity of intermediate landing sites (recall that phases are crucially involved in successive-cyclic movement). Thus, Legate (2003) shows that successive-cyclic movement targets the edge of passive and ergative VPs, which are not phases in Chomsky's (2000, 2001) system. Boeckx (2003b), Müller (2004), and I (Bošković 2002a) (also see Manzini 1994, Takahashi 1994) argue that successive-cyclic movement in fact targets every maximal projection on its path (Fox and Lasnik (2003) come close to reaching the same conclusion, and Chomsky (in press) also suggests it). Adopting this into a phase-based system would lead to the conclusion that every phrase is a phase (see Epstein and Seely 2002 for a similar conclusion reached on independent grounds, more precisely, the nature of Spell-Out), which is probably the simplest hypothesis, since then we do not have to look for a way of making only certain projections special in that they, but not other projections, are targets of successive-cyclic movement (see Epstein and Seely 1999, 2006, Bošković 2002a, and Boeckx and Grohmann 2004 for problems with Chomsky's way of making CP and vP special). The analysis to be proposed in the text does not depend on whether we adopt Chomsky's view of successive-cyclic movement, where such movement targets only CP and vP, or the Bošković/Boeckx/Müller/Takahashi/Manzini view, where successive-cyclic movement targets each maximal projection on its path. For ease of exposition, I will continue using the term *phase*, with the understanding that the notion can be understood either as in Chomsky 2000, 2001 (where only CPs and vPs are phases) or as in the phase update of Bošković/Boeckx/Müller/Takahashi/Manzini (where every phrase is a phase), the choice between the two being immaterial for current purposes.

feature K, which makes it visible for movement. (38) represents the same scenario, but before W enters the structure. (I assume that either K is checked as a reflex of F-feature checking between W and Y, or W has a K-feature that can check the K-feature of Y. For ease of exposition, I represent the latter option.)[32]

(37) W $[_{XP}$ . . . X . . . Y] XP = phase
uF iF
K uK
EPP

(38) $[_{XP}$ . . . X . . . Y] XP = phase
iF
uK

Why would Y need an uninterpretable feature to make it visible for movement? Since XP is a phase, given the PIC, which states that only the edge of a phase (Spec and head) is accessible from outside the phase, if Y is to eventually move out of XP it must first reach its Spec. In Chomsky's analysis, this is implemented by giving X the EPP property, which drives movement of Y to Spec,XP, with the proviso that X can be given the EPP property only if this is needed to make successive-cyclic movement possible, that is, only if Y does not remain in Spec,XP (in other words, at point (38) we need to know that W will enter the structure later, as in (37)). As discussed above, such lookahead is obviously problematic.

Consider now what we need to accomplish in (38). We need to know that Y will eventually need to move outside of XP, so that we move it to Spec,XP in (38), but we do not want any lookahead involved. Furthermore, as discussed above, Y should not be undergoing any feature checking within XP (recall that there is no feature checking with intermediate heads). So the first thing we need to know is that Y will have to move out of XP. Do we know that in (38)? In fact, we do. The uK of Y, which cannot be checked within XP, is what tells us that Y will need to move. If Y does not move to Spec,XP, its uK feature will never get checked. So, the uK feature of Y is what tells us that Y will have to move, and we know that without lookahead (i.e., we know it at point (38)). All of this would be repeated on any higher phase level. At this point in

[32] The latter is simpler, since the former has a bit of a miraculous flavor: why would F-feature checking have anything to do with uK? Nevertheless, I will remain neutral with respect to the two options. Notice also that in Chomsky's (1995b) system, the uK of Y would be a fully specified feature in need of checking, while in Chomsky's (2000, 2001) system, it would not be fully specified—checking would involve valuation of Y. Chomsky ties valuation to uninterpretability, uninterpretable features being unvalued. Although appealing in some respects, the proposal faces several problems. One obvious question is why valuation and interpretability should be tied lexically (also see Pesetsky and Torrego, in press). Another problem is that because Chomsky's proposal bars two uninterpretable features from being checked against one another, it forces Chomsky quite generally to tie checking of an uninterpretable feature F of a goal to checking of a different uninterpretable feature K of its probe (note that interpretable features cannot serve as probes owing to Last Resort), which makes feature checking rather cumbersome and leads to a proliferation of features involved in checking. Nevertheless, much of what I will say in the text will be neutral with respect to checking versus valuation. I will adopt checking primarily for ease of exposition. (The qualification ''for ease of exposition'' may need to be dropped in light of the problems noted above and the empirical evidence adduced in Bošković 2006b for the superiority of the checking approach.)

the discussion, we can assume that Y moves in search for a checker since its uK feature cannot be checked within XP, which means that leaving Y in situ in (38) will inevitably lead to a crash, and we know that at point (38).[33] The underlying assumption here is that Last Resort should be formulated as follows: X undergoes movement iff without the movement, the structure will crash (with crash evaluated locally). Movement of Y to Spec,XP in (38) then conforms to Last Resort.[34]

Notice that under the above analysis, there is no need to mark the intermediate head (X in (37)) with the EPP feature to drive movement to its Spec since the movement is independently required. In other words, we have just deduced intermediate EPP effects (i.e., EPP effects involved in intermediate, successive-cyclic movement) from the independently required uninterpretable feature of the moving element. We will see in section 6 that under the current analysis, the generalized EPP effect, which is treated in Chomsky's (2000, 2001) system as a formal requirement on the target to have an (additional) Spec, is fully deducible; hence, the generalized EPP mechanism can be eliminated (pending section 6, I will continue to assume the mechanism, but only for final targets of movement).

Under the current analysis, the AC is used to implement successive-cyclic movement. However, it is no longer a principle, but essentially a theorem, with an interesting twist that it must hold only for the cases where Y needs to move out of a phase to check a feature.[35] The role of the uninterpretable feature of Y is to identify Y as an element that needs to move at the point when no structure above XP is present. However, as noted above, the AC is not needed as an independent principle. Y in (37) will either have a uK or not. If it does not, it will never move out of XP (since it won't move to Spec,XP), as a result of which the uF of W will remain unchecked and its EPP property will not be satisfied. If Y has a uK, it will move to Spec,XP, as discussed above. It will eventually move to Spec,WP, satisfying the EPP property of W and checking the F-feature of W, the uK feature of Y being checked as a reflex of the F-feature-checking relation or by the corresponding K-feature in W. The movement of Y to Spec,XP in (37) is thus greedy, in the sense that Y moves to Spec,XP to help itself; if it does not move, its K-feature will remain unchecked (so, in a sense, the movement is feature-checking driven). Crucially, Y undergoes no feature checking with the X head. In fact, the X head has nothing to do with the movement of Y to its Spec. Recall that under Chomsky's (2000, 2001) approach, movement of Y to Spec,XP is driven by an inadequacy of the intermediate head X. This is not the case under the current approach, where the movement is driven by a property of Y. We thus do not need to posit a feature-checking relation between X and Y or an EPP feature on X. When it comes to

[33] I will return to this issue below from a somewhat different perspective, where the uK feature on Y essentially indicates that Y needs to move. Notice also that a proposal similar to the one made in the text is made independently by Surányi (2004) and Franks and Lavine (2006), who suggest that at the end of each phase, any phrase with an unchecked feature moves to the periphery of its phase in order to be accessible to a potential higher checker.

[34] Note that the alternative analyses discussed above also assume a version of Last Resort, which is needed to ban completely superfluous operations. (In fact, any time a statement is made that X is disallowed because it is not necessary, Last Resort is at work.)

[35] If there is no phase boundary between W and Y, Y does not need uK to move to Spec,WP (however, see the discussion below, which will require uK on Y even in this case for reasons independent of current concerns). Notice also that by ''AC'' I actually mean here ''the effect of the AC,'' namely, the requirement that a moving element bear a uK.

movement of Y to Spec,XP, the intermediate head X is an innocent bystander; it has nothing to do with it. Recall that, as discussed in section 3, this is exactly what we want.

We have thus accomplished the goal of implementing successive-cyclic movement without feature-checking relations with intermediate heads. Crucial to the analysis is the AC, which was used to implement successive-cyclic movement. However, I have argued that to the extent that it holds, the AC is now a theorem, which resolves the conceptual problem noted at the start of this section. This means that in addition to implementing successive-cyclic movement without feature-checking relations with intermediate heads, we have now deduced the effects of the AC. (In other words, the central effect of the AC—the obligatory presence of an uninterpretable feature on a moving element—is still there, although the AC does not exist as an independent principle. I will continue to use the term *AC* for ease of exposition, however.) So, successive-cyclic movement now works as it should, and we have understood the role of the AC, which is no longer a blatant stipulation.[36]

There is one interesting consequence of this approach to the AC. Since the role of the AC is to implement successive-cyclic movement, and since Agree does not involve movement at all, it follows that the AC should not hold for Agree. (Bhatt (2005) also suggests this.) This is a departure from Chomsky 2000, 2001, where the AC holds for both Move and Agree, but as a matter of principle. I will return in sections 5 and 6 to this consequence of the current analysis.

5 Remaining Problems

5.1 Staying in a Cyclic Spec

I have argued that there is no feature checking with intermediate heads on the path of successive-cyclic movement. Intermediate movement to a phase edge is driven by a property (an uninterpretable feature) of the moved phrase, not by an EPP feature of the intermediate head, which is now dispensable. Although the AC played the crucial role in the analysis, it is not needed as a principle to enforce the presence of an uninterpretable feature on the moving element. In other words, this principle is also dispensable (although it still holds empirically for Move as a theorem). We have now accomplished what we set out to do: the current approach to successive-cyclic movement combines the MCLP approach and Chomsky's (1995b, 2000, 2001) later approaches. As in the

[36] Note that Superiority can no longer be stated as an Attract Closest requirement. The problem is actually quite general in the early-successive-cyclic-movement approach, as discussed by Park (2005) and Chomsky (in press), both of whom abandon the Attract Closest account of Superiority. Thus, Park notes that under the early-successive-cyclic-movement approach, there are constructions in which *wh*-phrases can be reordered in a lower phase before [+wh] C enters the structure, voiding the superiority effect. In other words, the [+wh]-C-attracting-the-closest-*wh*-phrase account really relies on the late-successive-cyclic-movement analysis, on which [+wh] C enters the structure before *wh*-phrases start moving (as is necessary for the account to work). There are several ways of instantiating superiority effects in the current early-successive-cyclic-movement system. One possibility is that a Superiority violation occurs at the point when a *wh*-phrase moves over another *wh*-phrase along the lines of a derivational update of Cheng and Demirdache's (1990) analysis (under which Superiority would be a derivational constraint, but independent from any property of C). This suggestion is worked out in detail in Park 2005. Other possibilities are to treat Superiority as a representational constraint (see, e.g., Lasnik and Saito 1992) or have it follow from semantic considerations (see Hornstein 1995).

former, there is no feature checking in intermediate positions of successive-cyclic movement, which is driven by the moving element itself. However, as in the latter, successive-cyclic movement starts before the final target of movement enters the structure, and Form Chain is eliminated.

It seems, then, that we have accomplished the main goal of the article. However, there is a loophole in the analysis developed so far that needs to be closed. The analysis allows an element to stay in what would normally be an intermediate position of successive-cyclic movement. Consider, for example, the abstract structure in (39), where there is an Agree relation between X and Y involving feature F, and KP and ZP are phases.

(39) $[_{XP}$ X $[_{KP}[_{ZP}$ . . . Y
F uF

There are two cases to consider here: (40a), where X has the EPP feature, and (40b), where it does not.

(40) a. $[_{XP}$ X $[_{KP}[_{ZP}$ . . . Y
F uF
EPP

b. $[_{XP}$ X $[_{KP}[_{ZP}$ . . . Y
F uF

In (40a), Y would move to Spec,XP, passing through the Specs of KP and ZP (see (41a)). In (40b), on the other hand, Y would not move to Spec,XP, since X does not have the EPP feature. However, in the system developed so far, we would expect Y to move to Spec,KP in (40b), where it would be accessible for feature checking (i.e., undergoing Agree) with X, given the PIC (see (41b)). The uF of Y would drive movement to Spec,KP for reasons discussed in the previous section. Since in the position in question the uF of Y can be checked and X does not have the EPP property, Y would stay in Spec,KP. (Below, I will refer to Spec,KP as a *cyclic Spec*, and K as a *cyclic head*, meaning a head that does not undergo agreement with its Spec. Copies that are not pronounced and the relevant properties that are checked are written with strikeovers.)

(41) a. $[_{XP}$ Y X $[_{KP}$ ~~Y~~ $[_{ZP}$ ~~Y~~ . . . ~~Y~~
~~uF~~ F
~~EPP~~

b. $[_{XP}$ X $[_{KP}$ Y $[_{ZP}$ ~~Y~~ . . . ~~Y~~
F ~~uF~~

In (41b), then, Y moves to, and is pronounced in, what would be an intermediate position of successive-cyclic movement—more precisely, the highest intermediate position. Y thus moves and stays in a cyclic Spec to undergo Agree with a higher probe. Given the discussion so far, we would expect to find myriad examples instantiating the abstract structure in (41b). Under Chomsky's (2000, 2001) assumption that vPs and CPs are phases, one such example would be (42) in a language where the [+wh] C and a *wh*-phrase enter only into an Agree feature-checking relation, without movement of a *wh*-phrase/null operator to Spec,CP or unselective binding of

the *wh*-phrase (the latter presumably would not be subject to the PIC). *What* in (42) is located in Spec,vP, a cyclic Spec position.[37]

(42) [+wh] C you [$_{vP}$ what think that John bought]

However, it is not clear that there are any cases of this kind. In fact, I am not aware of any really convincing case that would instantiate the abstract structure in (41b).[38] The absence of this type of case would pose a problem for the analysis developed so far. The derivation in which an element remains in a cyclic Spec position in overt syntax, which is available in the system developed so far, would then need to be blocked.

There is another problem for the current system. It is not clear that Agree is subject to the PIC at all. In fact, several authors have offered empirical arguments that it is not (see Stjepanović and Takahashi 2001, Bošković 2003, Lee 2003; also, Chomsky (in press) suggests that there is no need to subject Agree to the PIC). Since the claim that Agree is insensitive to the PIC will turn out to have a significant impact on the current analysis, I will summarize some of the relevant arguments below. I will discuss consequences of this claim for the current analysis in section 6.[39]

5.2 Agree Is Not Subject to the PIC

5.2.1 Agree into Finite Clauses A number of languages allow Agree dependencies that clearly violate the PIC.[40] This is the case, for example, with languages that allow agreement to reach into a finite CP. One such language is Chukchee, as shown by example (43), noted in Inènlikèj and Nedjalkov 1973 and also discussed in Mel'čuk 1988, Ura 1994, and Stjepanović and Takahashi 2001. (The last work discusses the data in the same context as I do here. Irrelevant details are omitted from the glosses.)[41]

(43) ənan qəlɣiḷu ləŋərkə-nin-et [iŋqun Ø-rətəmŋəv-nen-at qora-t]
he regrets-3-PL that 3SG-lost-3-PL reindeer-PL
'He regrets that he lost the reindeers.'

[37] Here, I am using Chomsky's (2000, 2001) approach to phases rather than the every-phrase-is-a-phase approach (see footnote 31). Under the latter approach, it would be difficult to carry out the test since the *wh*-phrase would be located in the highest Spec right below C (i.e., it would end up being sentence initial even without *wh*-movement).

[38] See also Bobaljik and Wurmbrand 2005 for arguments against treating A-dependencies along the lines of (41b). However, it is worth noting that with A-movement, it is harder to show conclusively that the landing site of the relevant movement is a cyclic Spec position (i.e., an intermediate position of the kind illustrated in (41b)), rather than an actual feature-checking/EPP position, which in (41b) would involve feature/EPP checking between X and Y (in other words, it is harder to show that Spec,KP and K are true cyclic Specs/heads).

[39] To make the task at hand more difficult, in what follows I will be adopting Chomsky's approach to phases, where only certain phrases are considered phases, rather than the every-phrase-is-a-phase approach (see footnote 31). Under the latter approach, it would be rather easy to argue that Agree is not subject to the PIC, since any Agree relation into a complement across any phrasal boundary would violate the PIC.

[40] The discussion below is rather condensed. For a more detailed discussion of Agree in the languages reviewed in this section, see Bošković 2003 and references therein.

[41] The English translation, which corresponds to Inènlikèj and Nedjalkov's (1973) Russian translation, is provided by Mel'čuk (1988). (However, Bobaljik (2006) raises an issue regarding the translation.)

The matrix v agrees with the embedded-clause object in (43), an Agree relation that clearly violates the PIC. (43) then provides evidence that the PIC does not constrain Agree, which is what Stjepanović and Takahashi (2001) also conclude from it. Note that Alutor, a closely related language, behaves like Chukchee in the relevant respect (see Mel'čuk 1988).[42]

Several Algonquian languages also allow agreement to reach into a finite clause. In (44)–(45), I give examples from Blackfoot, originally noted by Frantz (1978) and discussed recently by Legate (2005). (Notice that we are dealing here with finite clauses. Some irrelevant details are omitted from the glosses.)[43]

(44) *kits*-íksstakk-a omá noxkówa m-áxk-itáp-aapiksistaxsi *kiistóyi* omi pokón-i
2-want-3 my.son.3 3-might-toward-throw you ball-4
'My son wants to throw the ball to/at you.'

(45) nits-íksstata-*wa noxkówa* ki niistówa n-áxk-a'po'takss-innaani
1-want-3 my.son.3 and I 1-might-work-1PL
'I want my son and myself to work.'

The agreement affix on the verb and the element it agrees with are italicized in (44)–(45). Like the Agree relation in (43), the Agree relations in (44)–(45) clearly violate the PIC (see also footnote 48, where I argue that coordinated phrases are phases).[44]

Notice also that, in addition to providing evidence that Agree is not subject to the PIC, examples like Blackfoot (44)–(45) seem to provide evidence that, as argued in section 4, Agree is not subject to the AC; that is, an NP does not have to have an unchecked case feature to be able to undergo agreement (see sections 6.2.3, 6.2.6, 6.2.7, and 6.3 as well as Bhatt 2005 for more examples of this type).[45]

[42] For an account of how this type of long-distance agreement is blocked in languages that disallow it, see Bošković 2003. (The account is indepedent of the PIC. Appealing to the PIC would incorrectly block this type of agreement for all languages.)

Note that in Bošković 2003, I argue that intervening verbs that are not in the same minimal domain as the agreeing NP induce a blocking effect with respect to v-NP agreement. If this is correct, we would not expect to find the type of object agreement under consideration with an NP that is embedded several clauses away from the relevant v, since the intervening verbs would induce a blocking effect. (In Bošković 2003, I show that several illegitimate Agree relations that do not conform to the PIC are ruled out independently of the PIC because they violate Agree Closest. Chomsky (in press) also observes that when it comes to Agree, there is a great deal of redundancy between the PIC and intervention effects (i.e., Agree Closest), which may be taken as another argument in favor of not subjecting Agree to the PIC.)

[43] Polinsky (2003) (see also Dahlstrom 1995) proposes a prolepsis analysis for the Blackfoot construction under consideration on which the matrix verb agrees with a null object. There are, however, serious problems with this analysis. For relevant discussion, see Frantz 1978, Branigan and MacKenzie 2002, and Legate 2005.

[44] Notice also that (45) involves first conjunct agreement; that is, the v agrees with the first conjunct of a coordinated NP. This would prevent giving Blackfoot the kind of analysis proposed by Ura (1994) for Alutor and Chukchee, on which the agreeing element (subject or object) undergoes covert movement to the matrix Spec,Agr_OP. Note that full agreement with embedded subjects is also possible (in fact, Blackfoot even allows long-distance agreement with the subject of an embedded question; see Frantz 1978).

[45] Long-distance agreement is also allowed in Tsez, as shown by Polinsky and Potsdam's (2001) (i).

(i) eni-r [už-ā *magalu* bāc'ru-łi] *b*-iyxo
mother-DAT boy-ERG bread.*III*.ABS ate *III*-know
'The mother knows the boy ate the bread.'

Polinsky and Potsdam argue that the NP agreeing with the higher verb in examples like (i) (the agreeing NP must be

5.2.2 Agreement in Existential Constructions Existential constructions in English provide additional evidence that Agree is not subject to the PIC. Legate (2003) provides several empirical arguments that passive and ergative VPs should be considered phases, on a par with active and nonergative VPs. As McGinnis (2004), Nevins (2004), and Legate (2005) point out, given this claim, example (46), where there is an Agree dependency between the indefinite NP (the goal) and the matrix I (the probe), provides evidence that Agree is not subject to the PIC since two phases (italicized) separate the probe and the goal. (Notice also the agreement in the tag question, pointed out by an anonymous reviewer.)

(46) [$_{IP}$ There I [$_{VP}$ seem to have [$_{VP}$ appeared two problems]]], (don't there)?

5.2.3 LF Anaphor Movement Chomsky (1986) proposes the LF anaphor movement hypothesis, according to which the anaphor in (47) undergoes LF movement to the matrix I, which agrees with the antecedent of the anaphor.[46]

(47) John believes himself to be smart.

The hypothesis has often been appealed to in the Minimalist Program, its precise implementation depending on the approach to covert dependencies at the time (see, e.g., Chomsky 1993, 1995b, in press, Lasnik 1999, Reuland 2001). In the Agree-based framework adopted here (see footnote 29), the LF anaphor movement would be instantiated as an Agree relation between I and the anaphor (see Chomsky, in press, for such an Agree analysis). In light of this, consider (48).

(48) [$_{IP}$ Mary I [$_{vP}$ believes [$_{CP}$ that pictures of herself, Peter would never sell]]].

Under the Agree implementation of the LF anaphor movement hypothesis, there is an Agree relation between the matrix I and the anaphor in (48). The relation obviously violates the PIC (intervening phases italicized), providing additional evidence that Agree is not subject to it.

5.2.4 Wh-*in-Situ* Lee (2003) observes that if *wh*-phrases in *wh*-in-situ languages, such as the *wh*-phrases in Chinese (49) and Japanese (50), undergo Agree with the interrogative C, *wh*-in-

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absolutive) undergoes LF topicalization to the edge of the embedded clause; if the relevant Agree relation applies following the LF movement, it does not violate the PIC. (Notice that on Polinsky and Potsdam's account, Tsez has both topics with, and topics without, a topic marker, which I will refer to as *topic-marked* and *non-topic-marked* topics, respectively.) However, elsewhere I show that there are several problems with this analysis (Bošković 2003; see also Chandra 2006). To mention just one, Polinsky and Potsdam (p. 639) give a context in which long-distance agreement is impossible although a non-topic-marked ''topic-in-situ'' should be able to undergo LF topicalization, becoming accessible for long-distance agreement; in Bošković 2003, I interpret this as indicating that non-topic-marked elements do not undergo LF topicalization in Tsez. The context in question involves a higher, non-topic-marked topic attempting to undergo long-distance agreement, and a lower, topic-marked topic (more precisely, a topic-marked NP that is not higher than the agreeing NP). Under Polinsky and Potsdam's analysis, on which both topic-marked elements and what they consider non-topic-marked topics (e.g., *magalu* in (i)) are eligible for LF topicalization, the higher non-topic-marked topic should be able to undergo LF topicalization, becoming eligible for long-distance agreement. I refer the reader to Bošković 2003 for a comprehensive analysis of the Tsez data discussed by Polinsky and Potsdam, according to which Tsez provides additional evidence that Agree is not subject to the PIC. It is also worth noting that Polinsky and Potsdam's analysis of Tsez is designed to disallow long-distance agreement across an overt complementizer and into an embedded question. As a result, it does not extend to Chukchee (see (43)) and Blackfoot (see footnote 44).

[46] The relevance of the anaphor movement hypothesis to current concerns was noted by Duk-Ho An (pers. comm.).

situ constructions in such languages abundantly illustrate the insensitivity of Agree to the PIC.[47] For example, the Agree relation between the matrix C and the *wh*-phrase in (49)–(50) clearly violates the PIC.

(49) John renwei Peter mai le sheme?
John think Peter buy ASP what
'What does John think that Peter bought?'

(50) John-ga Peter-ga nani-o kat-ta to omotteiru no?
John-NOM Peter-NOM what-ACC buy-PAST COMP think Q
'What does John think that Peter bought?'

5.2.5 The Phase Impenetrability Condition and Linearization We have seen a number of empirical arguments that the PIC does not hold for Agree.[48] That Agree is not subject to the PIC may even be desirable theoretically. Several authors (see Stjepanović and Takahashi 2001, Bošković 2003, Fox and Pesetsky 2005) have argued that the PIC effect for successive-cyclic movement essentially follows from PF considerations. More precisely, these authors argue that if an element that is to move out of a phase does not move via the Spec of the phase, the structure cannot be properly linearized in PF. The underlying assumption here is Chomsky's (2001) proposal that phases determine which chunks of syntactic structure are shipped to Spell-Out. In particular, Chomsky proposes that once a phase level is reached, everything but the edge of the phase (i.e., the complement of the phase) is shipped to Spell-Out. At that point, word order for the unit that is sent to Spell-Out is established. A natural consequence of this analysis is that if something will ever move, it cannot be contained in a unit that is shipped to Spell-Out (see also Chomsky, in press). If it is, a PF problem will arise with respect to linearization. (The gist of the analysis pursued in Bošković 2003 and in Fox and Pesetsky 2005 is that linearizing Y in the original spell-out unit and a later spell-out unit would lead to conflicting ordering requirements.) This

[47] In this connection, note that Pesetsky (2000) argues that Japanese *wh*-in-situ should be analyzed in terms of Move F, which is replaced by Agree in the Agree-based framework. (See Chomsky 2000 and Bošković 2003. However, Pesetsky suggests a different analysis for Chinese.)

[48] In Bošković 2003, I give two additional arguments to this effect. One argument (see also Stjepanović and Takahashi 2001) is based on Landau's (2000) analysis of control, under which obligatory exhaustive subject control involves an Agree relation between the ϕ-features of Tense and PRO in the configuration in (i), an Agree relation that clearly violates the PIC.

(i) T $[_{vP}[_{CP}[_{IP}$ PRO

I argue that the data in (ii) concerning first conjunct agreement in existential constructions in English, discussed in Munn 1993, Sobin 1994, 1997, Bošković 1997b, and Schütze 1999, among others, also provide more evidence that, unlike Move, Agree is not subject to the PIC.

(ii) a. There is a woman and five men in the garden.
b. *A woman is and five men in the garden.

(iia–b) show that agreement with the first conjunct of the existential *there*-construction is possible, although the conjunct cannot undergo movement. In Bošković 2003, I argue that the Coordinate Structure Constraint is a PIC effect. The gist of the analysis is that the highest phrase (a CP-like projection) in the coordination phrase is a phase, but an element moving out of a coordination phrase (*a woman* in (iib)) cannot move through its Spec since this would cause a semantic problem. The problem with (iib), then, is that the movement of *a woman* ends up not observing the PIC. What about (iia)? While movement of the first conjunct is impossible, agreement with the first conjunct is possible. This immediately follows given that phases and the PIC are irrelevant to Agree.

way, PIC effects are deduced: Y has to move to Spec,XP, XP a phase, in order not to get caught in a spell-out unit, which would lead to a PF violation. The freezing effect of phases, with the PIC as an escape hatch, follows. It is established via pronunciation (i.e., it holds for PF), but it has an effect on successive-cyclic movement; more precisely, it forces it to proceed via the Spec of phase heads.[49] Stjepanović and Takahashi (2001), Fox and Pesetsky (2005), and I (Bošković 2003) all observe that given that the PIC effect is achieved via PF, it would be redundant to duplicate the phase/PIC effect in the syntax, which would happen if we were also to assume, following Chomsky (2000), that only the edge of a phase is visible from outside the phase in the syntax (i.e., the PIC). We therefore argue that the PIC should be eliminated as a syntactic locality condition (Chomsky (in press) also hints at this). In other words, phases and the PIC have no direct relevance to the locality of syntax (which means that in the syntax itself, phases are accessible from the outside); the only thing they determine is what is shipped to Spell-Out (i.e., units of multiple Spell-Out). Details of the analysis are not important for present purposes (in fact, the works in question implement this general idea in different ways). Here, what is important from this line of research is that given that we can obtain successive-cyclic movement via PF (i.e., given the assumption that the complement of a phase head is sent to Spell-Out), it would be redundant to duplicate the phase/PIC effect in the syntax by assuming that only the edge of a phase is visible from outside the phase *in the syntax*. This means that the PIC as a syntactic locality condition should be eliminated. More generally, phases have no direct relevance to the locality of syntax—they do not define syntactically opaque domains. It then follows that phases/the PIC are irrelevant to pure Agree.[50] Reducing the direct effect of phases to the syntax-phonology interface thus leads to positing a rather radical distinction between Move and Agree: while Move is constrained by the PIC, Agree is not. And, as we have seen, there is also considerable empirical evidence that Agree is insensitive to phases/the PIC.

To summarize, the central points made in this section are these: the analysis developed in section 4 allows for the possibility that Y can stay in the Spec of a cyclic head where it undergoes Agree with a higher probe, which seems undesirable; and, unlike Move, Agree is not subject to

[49] All of this will be implemented via the AC in section 6 (among other things, the AC will be used to identify the moving element), so that considerations of feature checking are involved in successive-cyclic movement in the syntax.

[50] Note also that, unless additional assumptions are adopted, sending a unit X to Spell-Out in itself would not freeze X for further syntactic computation, hence would not block application of Agree into X. Consider, for example, the standard assumptions regarding Spell-Out in the pre–multiple Spell-Out model (see Chomsky 1995b): the phonology was simply assumed to strip off the phonological features (i.e., the features it needs), all other features remaining in the syntax, where they were accessible for syntactic computation and for semantics. In a multiple Spell-Out system, the only difference is that the operation of Spell-Out applies more than once. Under this simple conception of Spell-Out, an application of Spell-Out to X by itself does not freeze X for Agree.

Notice also that I assume that phases themselves cannot fully define the syntactic cycle. (In the current system, phases in fact have no direct relevance to syntax.) Regarding the cycle, I am adopting the standard assumptions, some of which would need to be given up if the cycle were to be defined on phases alone. (Chomsky (2000) also seems to assume that the syntactic cycle should not be defined on phases alone. See his page 132 (condition (53)) and pages 136–137 for various approaches to the cycle.) Thus, I assume the following: (a) the cycle is defined with respect to the target of Move/Agree (this means that in principle, we can return to a lower level to pick a moving element/a goal as long as the target of movement/the probe is in the highest cycle; (b) all syntactic operations, except perhaps adjunction, are strictly cyclic (this would not be the case in a strictly phase-based-cycle system, where, for example, we could first do movement to the CP projection, and then do movement to a projection within the (split) IP).

the PIC. While it may be possible to capture the latter state of affairs by reducing the effect of the PIC to the syntax-phonology interface along the lines sketched above, what is important for present purposes is simply that, in contrast to Move, Agree is not subject to the PIC.[51] In the next section, I will consider the consequence of Agree's not being subject to the PIC, showing that it brings us back to Chomsky's (2000, 2001) lookahead problem discussed in section 3.

6 Eliminating the Generalized EPP

6.1 The Lookahead Problem Revisited

Let us consider the lookahead problem with respect to (37)–(38), repeated as (51)–(52).

(51) W $[_{XP}$ . . . X . . . Y] XP = phase
uF iF
K uK
EPP

(52) $[_{XP}$ . . . X . . . Y] XP = phase
iF
uK

In section 4, I suggested that Y moves to Spec,XP, XP a phase, so that the uK feature of Y can eventually be checked. The underlying assumption is that if Y does not move, its uK feature will never get checked, causing the derivation to crash, the crash being determined locally (i.e., at point (52)). Recall, however, that phases/the PIC are irrelevant to Agree. This means that the uK can in principle be checked even if Y remains buried within a phase. But then there is no need to move Y to check the uK in (52), which means that the uK cannot drive movement of Y (i.e., the need to check the uK cannot drive movement since the derivation will not crash for certain without the movement). Now, Y will eventually have to move for feature-checking purposes because of W, which has an EPP feature. This means that there is a need to move Y to Spec,XP. However, we do not know this at the point that structure building has reached in (52); we will know it only once W enters the structure, as in (51). In other words, we need lookahead: at the point when (52) has been built, we need to know that W will eventually enter the structure. As noted in section 2, such lookahead is also needed in Chomsky's (2000, 2001) system. So, the insensitivity of Agree to the PIC has brought us back to Chomsky's lookahead problem. Since one of the central goals of this article is to resolve the lookahead problem, we cannot simply (and regrettably) accept it as a fact of life. Let us, then, see how we can resolve it.

The problem with (51) is that the diacritic indicating that Y will have to move to Spec,WP is placed on W, given that we need to know that Y will be moving before W enters the structure. As noted above, the problem is quite general in Chomsky's (2000, 2001) system. For example, in this system, in order to decide whether *what* will move to the Spec of *that* in (53), we need

[51] In other words, the following discussion does not depend on the particular way of deducing the Move/Agree difference suggested above.

to know at the point that structure building has reached in (53) whether the structure above (53) will be expanded as in (54) or (55).

(53) that John bought what

(54) Who thinks that John bought what?

(55) Mary thinks that John bought what?

The problem here is the same one we faced with respect to (52). The EPP feature, which indicates whether element Y will move overtly or not, is placed on an element (W) other than the one that is undergoing the movement in question, and sometimes we need to know whether Y will be moving overtly to Spec,WP before W enters the structure. To put it more succinctly, the gist of the lookahead problem that arises under the EPP-driven movement approach is that the EPP diacritic indicating that Y moves is placed on W, but Y often needs to move (i.e., start moving) before W enters the structure.

The conclusion to be drawn from this state of affairs is obvious: we have been wrong in placing the diacritic indicating the need for overt movement on the target (W); instead, it should be placed on the moving element (Y). One straightforward way of achieving this would be to interpret the EPP property to mean 'I need to be a Spec', instead of 'I need to have a Spec' (the latter is what Chomsky (2000, 2001) does), and then place it on Y instead of W. This is obviously not an appealing way of resolving the issue, so we should try to do better. In fact, let us try to eliminate the EPP diacritic altogether. During the discussion to follow, also bear in mind the goal with respect to (51)–(52): given that, unlike Agree, Move is subject to the PIC, we need to be able to identify Y as an element that needs to undergo overt movement out of XP at point (52).

It is standardly assumed that a probe must c-command its goal (i.e., it probes only its c-command domain) and that the probe must have an uninterpretable feature; otherwise, there would be no need for it to function as a probe. Following an important insight of Epstein and Seely (1999) (see also Abels 2003, Bošković 2002a, Boeckx 2003c, 2004, Epstein and Seely 2006), I assume that the correlation between functioning as a probe and having an uninterpretable feature is a two-way correlation: just as a probe must have an uninterpretable feature, so an uninterpretable feature (i.e., an element with an uninterpretable feature) must function as a probe. In other words, checking of a uK feature on X requires X to function as a probe; more precisely, the uK of X can be checked and deleted if and only if X c-commands the checker. This means that Y in (51) will need to undergo overt movement out of XP in order to license its uK. In fact, pure Agree will not suffice for that even if Y is located in Spec,XP, with no other phases intervening between Y and W. We have thus eliminated the possibility of Y staying in the Spec of a cyclic head, where it would undergo Agree with a higher probe, discussed in section 5 (see (41b)). Most importantly, regarding (51)–(52), we now know that Y will need to undergo overt movement out of XP before W enters the structure: already at point (52), we know that the structure will crash unless Y moves out of XP (the uK on Y essentially says, ''I am moving!''). In other words, Y will have to move to a position c-commanding the uK licenser in order to check the feature, and since the uK licenser is not present within XP, Y will have to move overtly out of XP, hence will have to move to

Spec,XP. (Note that all of this is in accordance with the formulation of Last Resort from section 4.) Eventually, Y will have to move to a position c-commanding W. Given the Shortest Move requirement, it will in fact move to the closest position c-commanding W, namely, Spec,WP.[52]

We have thus resolved both problems noted in section 5: we have eliminated the possibility of Y staying in the Spec of a cyclic head to undergo Agree with a higher probe, as in the configuration in (41b); and we have found a way of identifying Y, already at point (52), as an element that will have to undergo overt movement in (51)–(52), resolving Chomsky's (2000, 2001) lookahead problem that Agree's insensitivity to the PIC brought back into the system developed here.

Recall that the AC does not hold for Agree. The above discussion leads to an even stronger conclusion: the AC configuration, where the goal has an uninterpretable feature uK, can in fact never lead to pure Agree, since it will always force the relevant element to undergo movement so that it can function as a probe.[53]

There is another consequence of this analysis: the generalized EPP effect has just been deduced. (By *Generalized EPP* I don't mean just the traditional EPP, which holds of the Spec of IP, but the more general requirement that certain heads have a Spec.)[54] Thus, Y in (51), repeated here, will now have to move to Spec,WP even if W does not have the EPP property, which is then dispensable.

(56) W $[_{XP}$ . . . X . . . Y] XP = phase
uF iF
K uK
~~EPP~~

Under the analysis adopted here, generalized EPP effects follow from the AC (i.e., the uK of the moving element), which itself follows from something else. Since the beginning of the Minimalist Program, there have been various ways of stating the generalized EPP effect formally: early on, this was done through strong features; and currently, it is done through the EPP diacritic, which indicates that certain heads need Specs. In the approach adopted here, generalized EPP effects follow from the uK feature of the moving element, which is independently needed even in Chomsky's system, which crucially relies on the Generalized EPP. I conclude therefore that generalized

[52] See Richards 2001 for relevant discussion of Shortest Move. Head movement would also be an option, if it exists in overt syntax (see Chomsky 2004 and Boeckx and Stjepanović 2001 for claims that it does not). If it does exist, there is the question, independent of the current analysis, of whether a feature to be checked will be checked in a specifier-head or a head-head configuration (for relevant discussion, see Bošković 2001).

[53] An exception is the head-complement configuration, which involves mutual c-command between the head and its complement (hence, either can function as a probe or a goal).

[54] See Epstein and Seely 1999, 2006, for discussion of the traditional EPP in this context, which is generalized in this article and includes an exploration of a number of additional consequences, including an extension to successive-cyclic movement and *wh*-movement. (Notice that the analysis of the traditional EPP effect adopted here is also quite different from Epstein and Seely's analysis, as should become obvious during the discussion of the Inverse Case Filter below.)

The reader is also referred to Fernández-Salgueiro 2006, where it is conclusively shown that the BELIEVE construction that was left open as the remaining argument for the EPP in Bošković 2002a is in fact ruled out independently of the EPP (for relevant discussion, see also Epstein, Pires, and Seely 2004, Epstein and Seely 2006).

EPP effects follow from an independently needed mechanism. The interesting twist of the current analysis is that the generalized EPP effect is stated as a property of the moving element, not the target,[55] which has helped us analyze without lookahead constructions where we need to know whether overt movement will take place before its target enters the structure.

Eliminating the EPP is clearly a conceptually desirable move (see also Epstein and Seely 2006 for much relevant discussion). It's not just that this move simplifies the grammar by eliminating a mechanism, which is always desirable. It's that the mechanism in question doesn't make much sense from the current theoretical point of view. In Chomsky's earlier (1995b) system, the EPP was just another feature that needed to be checked, and it was checked in the same configuration as other features. In other words, there was nothing special about it. This is not the case with Chomsky's (2000, 2001) system. In this system, the EPP is not a feature to be checked—it actually does not involve feature checking at all. In fact, it is unlike anything else in the theory. Its love-hate relationship with feature checking is particularly curious. Under Chomsky's current conception of the EPP, although the EPP itself does not involve feature checking, it piggybacks on feature checking, in the sense that an element that moves to satisfy the EPP must have a particular feature makeup (i.e., it's not the case that just anything can satisfy the EPP), must undergo feature checking (i.e., Agree) with the target, and must have an uninterpretable feature independent of the EPP. Theoretically, the EPP is a very special mechanism, unlike anything else in the current system. As a result, eliminating it is clearly conceptually desirable.

6.2 On the Traditional EPP, the Case Filter, and the Inverse Case Filter

6.2.1 Movement to Spec,IP Let us see now in more detail how the traditional EPP effect is deduced in the current approach. Consider (57), a case of the traditional EPP effect (cf. (58)).

(57) *Arrived John.

(58) John_i arrived t_i.

Like all nouns, *John* has an uninterpretable case feature (which is a minimalist instantiation of the traditional requirement that nouns have case, referred to below as the Case Filter for ease of exposition[56]). To check the feature, *John* has to move to Spec,IP, so that it can probe I. (57) is ruled out because the uK of *John* is not checked. Under this analysis, the traditional EPP follows from the uK of *John*, which is actually the traditional Case Filter. In other words, traditional EPP effects exist because nouns have case. Given this assumption, which is also adopted by the standard EPP-based analysis, we can then dispense with the traditional EPP.[57]

[55] This is quite generally in line with the shift in the current system from target-driven movement to moving-element-driven movement.

[56] How the case requirement is imposed is not our concern here; I am using the term *Case Filter* simply to indicate the existence of this requirement.

[57] Note also that, as discussed by Epstein and Seely (1999), there is a mutual c-command relation between an element in Spec,IP (K) and I: K merges with the object that is labeled by I, hence is I, given that the label is the head (see Chomsky 1995a). K in Spec,IP and I then c-command each other under Epstein's (1999) derivational approach to c-command. Quite generally, then, given mutual c-command, two elements in a specifier-head configuration can probe

Several recent works (Epstein and Seely 1999, 2006, Martin 1999, Boeckx 2000a, Grohmann, Drury, and Castillo 2000, Bošković 2002a) attempt to eliminate the traditional EPP account for (57) by appealing to the Inverse Case Filter (see Bošković 1997b), more precisely, the requirement that traditional case assigners *must* check/assign their case in a specifier-head configuration. Under the current analysis, there is no need to appeal to either the EPP or the Inverse Case Filter to account for (57); they are both dispensable. All we need is (a version of) the traditional Case Filter.[58]

Under the analysis adopted here, the Case Filter, which under various guises has been assumed throughout the GB and minimalist frameworks (stated as a checking/valuation requirement in the latter), is crucially involved in A-movement; it is in fact the sole driving force for A-movement. Without it, A-movement could not exist. We may thus have an answer to the important question of why there is a Case Filter. In other words, we come close to reaching the level of explanatory adequacy regarding the mechanism in question.

6.2.2 Overt Object Shift The current analysis leads to adopting the overt object shift analysis of English, which means that English (in fact, any language) has overt movement of accusative elements to Spec,Agr$_O$P/Spec,vP, motivated by licensing of the accusative case of the object, an uninterpretable feature. There are many arguments in the literature to this effect (see, e.g., Authier

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each other; that is, they can serve as goals for each other (for relevant discussion, see also Bejar 2003 and Rezac 2003). There are then two options in a structure like X(uK) . . . Y(uK), where X and Y need to probe each other and X is higher than Y before Y moves to Spec,XP: either X will probe Y before Y moves to Spec,XP (if uninterpretable features do not disappear before they are sent to Spell-Out) or X will probe Y after Y moves to Spec,XP (i.e., at that point X and Y will probe each other).

[58] Traditional case assigners can, of course, still check their case. However, there is no need to enforce the checking of their case. This seems desirable, given the number of well-known empirical problems with the Inverse Case Filter. Some of them concern the existence of verbs that appear to assign case only optionally, which goes against the spirit of the Inverse Case Filter. Compare, for example, (ia) with (ib). Examples like (iia–b) make the same point.

(i) a. John laughed.
b. John laughed himself silly.

(ii) a. Mary is dressing (herself).
b. Peter is eating (apples).

Slavic genitive of quantification and genitive of negation also provide evidence against the Inverse Case Filter (see Franks 2002 for relevant discussion). In a number of Slavic languages, verbs that assign structural accusative fail to assign it when their object is a higher-numeral NP; this is illustrated for Serbo-Croatian in (iii). (The noun in (iiib), which must bear genitive, receives its case from the numeral.) The same happens when a verb is negated, as illustrated by Polish (ivb), where genitive of negation is obligatory. (One can come up with similar arguments against obligatory assignment of nominative as well as some lexical cases; see Franks 2002.)

(iii) a. On će kupiti kola. (Serbo-Croatian)
he will buy car.ACC
b. On će kupiti pet kola.
he will buy five cars.GEN

(iv) a. Janek czytał książkę. (Polish)
Janek read books.ACC
b. Janek nie czytał książki.
Janek NEG read books.GEN
'Janek did not read books.'

1991, Johnson 1991, Ura 1993, Koizumi 1995, Bošković 1997a,b, 2002a, 2004a, Runner 1998, Epstein and Seely 1999, 2006, Lasnik 1999, McCloskey 2000, Boeckx and Hornstein 2005). The arguments are particularly strong regarding the ECM accusative, which must be a structural case. (Direct object accusative could be an inherent case since the case-licensing verb θ-marks the NP in question, which means that it is not necessarily an uninterpretable feature.)[59] Since the current analysis crucially relies on overt object shift, I will summarize a few arguments for it. (For more detailed discussion, see the references given below. For brevity, I follow the theoretical assumptions adopted in the original references.)

As noted in section 3.3, McCloskey (2000), who discusses quantifier float under *wh*-movement in West Ulster English, shows that (59), where *all* is floated under *wh*-movement of *who*, provides evidence for overt object shift. Given that the infinitival subject in (59a) moves overtly to the higher clause for case checking, there is space for the quantifier to be stranded preceding *to*. This is not the case with (59b), where the infinitival subject is case-marked within the infinitive (see Bošković 1997b:19 for a way of doing this that is consistent with the system developed here).

(59) a. Who did you expect your mother all to meet at the party?
b. *Who did you arrange for your mother all to meet at the party?

Lasnik (1999) presents an analysis of pseudogapping that requires overt object shift. More precisely, he argues that (60) involves overt object shift, followed by VP-ellipsis (see Lasnik 1999 for an explanation of why the verb, which normally moves above the shifted object, need not move if it is elided in PF).

(60) The DA proved Jones guilty and the Assistant DA will Smith$_i$ ~~[$_{VP}$ *prove* t_i *guilty*]~~.

Lasnik also gives an argument concerning (61). On the basis of (61a), he argues that covert movement does not affect binding possibilities. (He assumes that the indefinite moves to the matrix IP covertly.) The ECM subject in (61b), where the adjunct modifies the matrix clause, then must be moving to the matrix clause overtly.

(61) a. *There seem to each other$_i$ to have been some linguists$_i$ given good job offers.
b. The DA proved two men$_i$ to have been at the scene during each other's$_i$ trials.

Boeckx and Hornstein (2005) demonstrate that by assuming overt object shift, we can account for the lack of ECM double object constructions (i.e., hypothetical *He PERSUADED Mary Bill to know French*, where object shift of *Bill* would violate Relativized Minimality).

[59] In this connection, see Bošković 2002a, where I observe that a situation where accusative can be either structural or inherent can lead to optional overt object shift with simple transitives though not with ECM, where the inherent case option is unavailable because there is no θ-relation between the verb and the NP that undergoes ECM. (Bošković 2002a discusses English. For relevant discussion of Kinande, see Bošković, in press b.) It is also not out of the question that an object NP in simple transitives could get case-licensed for structural case in situ by probing the verb, which it c-commands from its base position. This option would not be available to NPs that undergo ECM, since they do not c-command the verb from their base position.

In Bošković 1997a,b, I provide another argument, based on (62). Without overt object shift and the accompanying V-movement (the overt-object-shift analysis assumes short V-movement, unlike the no-overt-object-shift analysis), the construction can only be analyzed as involving infinitival coordination (see (62a)). But then it is impossible to case-license the subject of both infinitives. Only one of them can be case-licensed, and its case-licensing movement violates the Coordinate Structure Constraint. (Since the subjects are distinct, across-the-board movement is not an option. Moreover, Bošković and Franks (2000) show that quite generally, there are no covert across-the-board dependencies although the Coordinate Structure Constraint is operative in covert syntax.) Under the overt-object-shift analysis, the construction can be analyzed as involving matrix Agr_OP coordination (see (62b)), so that both infinitival subjects can be case-licensed without a violation.

(62) a. John $[_{Agr_OP}[_{VP}$ believes $[_{IP}$ Jim to be crazy] and $[_{IP}$ Mary to be smart]]].
b. $John_i$ $believes_j$ $[[_{Agr_OP}$ Jim_k t_j $[_{VP}$ t_i t_j $[_{IP}$ t_k to be crazy]]] and
$[_{Agr_OP}$ $Mary_l$ t_j $[_{VP}$ t_i t_j $[_{IP}$ t_l to be smart]]]].

As noted in Bošković 1997b, the unacceptability of (63) (even on the matrix-clause reading of *when*) provides evidence that *whom* must be higher than *when* prior to *wh*-movement, a state of affairs that can readily be accounted for if *whom* must move into the matrix clause via object shift prior to *wh*-movement (see Bošković 1997b:118–121, 2002a:210, for discussion of the full relevant paradigm).

(63) *When did John prove whom to be guilty?

The grammaticality of (64), where a matrix adverbial follows the embedded-clause subject, also provides evidence that the infinitival subject moves overtly into the matrix clause (see Postal 1974).

(64) I've believed John for a long time now to be a liar.
(Kayne 1985)

As noted in section 3.1, the possibility of quantifier float in (12), repeated here as (65), provides another argument to this effect.

(65) I believe the students $[_{IP}$ [all t] $[_{I'}$ to [t know French]]].

In short, the current system leads to adopting the overt-object-shift analysis, which has considerable independent support.[60]

[60] Note that the above arguments apply equally to definite and indefinite NPs, indicating that English object shift differs from what Bobaljik (1995) and Diesing (1996) consider to be object shift in other Germanic languages, characterized by a definiteness effect. However, there is considerable evidence that what is considered to be object shift in, for example, Icelandic actually involves movement to a position above Spec,Agr_OP (see, e.g., Holmberg and Platzack 1995, Bošković 1997b, 2004a,b, Chomsky 2001). In Bošković 2004a, I in fact argue that the definiteness effect, absent from English but present in Icelandic, arises as a result of movement of definite NPs to a position *above* Spec,Agr_OP in Icelandic (not *to* Spec,Agr_OP).

6.2.3 On the Obligatoriness of Case Movement A rather strong argument for the current system, which requires NP-movement to the Spec of a case licenser, is provided by examples like those in (66)–(67), which instantiate the abstract structure in (68).

(66) *I know what it seems (clear).

(67) a. *I know what John conjectured.
b. *I know what John remarked.

(68) Subject V[$_{[+\text{wh}]\ \text{CP}}$ *wh*-object$_i$ [Subject V(caseless) t$_i$]]

Seems clearly does not assign case. As discussed in Bošković 1997b, *conjecture* and *remark* also do not assign case (cf. **John conjectured something/it* and **John remarked something/it*).[61] The question then arises why *know* apparently cannot case-license *what* in (66)–(67), given that *know* clearly has the ability to do that. (66)–(67) present a rather serious problem for Chomsky's (2000, 2001) system. It appears that nothing prevents establishing a probe-goal relation between the matrix v and *what*, which should result in the case-licensing of *what*. From the current perspective, (67) is straightforward: the derivation in question is blocked because *what*, with its uninterpretable case feature, must function as a probe (i.e., it must c-command the matrix v). The only way this can be accomplished is if *what* moves to the matrix Spec,vP. However, this derivation is ruled out because *who* is located outside its scope (embedded CP), which is disallowed (see Saito 1992).

Notice also that in principle v can enter into an Agree relation with an NP in an interrogative Spec,CP, as indicated, for example, by sentence (69) from Innu-aimûn (a language with obligatory overt *wh*-movement). In this sentence, as Branigan and MacKenzie (2002) show, the matrix verb exhibits object agreement with the *wh*-phrase in Spec,CP. (This type of agreement is apparently not limited to *wh*-subjects. See also Bruening 2001 regarding Passamaquoddy, and Polinsky and Potsdam 2001:638 regarding Tsez. For discussion of such examples within the system developed here, see Bošković 2003.)

(69) Tshi-tshissenim-âu-â auen ka-pâpîtaka?
2-know-3-Q who is laughing
'Do you know who is laughing?'
(Branigan and MacKenzie 2002:394)

Notice, however, that (69) differs from (66)–(67) in that the *wh*-phrase is case-checked within the embedded clause. The matrix v can then undergo Agree with the *wh*-phrase; there is no need to move the *wh*-phrase to a position c-commanding the v. Notice also that (69) provides additional evidence that Agree is not subject to the AC.

[61] *Conjecture* and *remark* may function as case assigners for some speakers, who should also find (67) acceptable (see also Epstein and Seely 2006 regarding *conjecture*). The argument about to be given is based on the judgment of speakers for whom these verbs are not case assigners (i.e., for whom the baseline data hold).

I include (67) just in case expletive *it* constructions involve an expletive-associate relation that *wh*-movement somehow interferes with in (66) (see also Vukić's (2003) Last Resort expletive insertion hypothesis, where expletives are inserted only as a last resort).

In light of the above discussion, I conclude that examples like (66)–(67) provide evidence that case cannot be licensed in situ without movement to the case licenser.

6.2.4 Wager-*Class Verbs: Case Marking during* Wh-*Movement* The current system, where an NP probes its case licenser, may also shed some light on the long-standing problem presented by the behavior of verbs like *wager*, which, as noted by Postal (1974), can exceptionally case-mark a *wh*-trace, but not lexical NPs.

(70) a. *John wagered Mary to be smart.
b. Who did John wager to be smart?

In Bošković 1997b, I argued that (70a) involves a locality violation. Assuming the overt-object-shift analysis, I argued that because of an additional VP shell with a filled Spec that occurs with this class of verb, *Mary* cannot reach the matrix Spec,vP without violating locality. (I basically argued that (70a) involves A-movement across a (nonequidistant) A-Spec.) As for (70b), a number of authors have tried to account for this construction by assuming that *who* somehow gets case-licensed during successive-cyclic *wh*-movement, an assumption that has turned out to be hard to implement (see, e.g., Ura 1993 and Bošković 1997b for relatively recent attempts to do that, and Kayne 1984 for the original proposal). In the current system, where an NP probes its case licenser, accounting for (70b) becomes straightforward: *who* probes *wager* (i.e., its v) during successive-cyclic *wh*-movement as soon as it reaches a position that c-commands *wager*/v. Since there is no feature-checking A-movement to the matrix Spec,vP in (70b) (i.e., object shift), the locality problem that arose in (70a) does not arise in (70b).[62]

6.2.5 Quirky Subject Constructions Let us now consider constructions where the traditional EPP has often been assumed to be the sole driving force of a syntactic operation. Consider first quirky subject constructions in languages like Icelandic. They can be straightforwardly accounted for in the current system given that, as a number of authors have argued (see, e.g., Belletti 1988, Cowper 1988, Freidin and Sprouse 1991, Bejar and Massam 1999, Frampton and Gutmann 1999, Chomsky 2000:127, in press, Bošković 2002a, Williams 2006), quirky subjects have a structural case, which is not morphologically realized, on top of their inherent case.[63] Their movement to Spec,IP can then be driven by the need to check this case. In this respect, it is worth noting that (as observed in, for example, Boeckx 2003a) quirky subjects in Icelandic are subject to the customary freezing effect that case checking has on A-movement. Like structurally case-marked NPs, once they move to a case-checking Spec,IP, quirky subjects cannot undergo further A-movement, which can be easily accounted for under the case-driven-movement analysis of quirky

[62] Note that if *who* passes through the matrix Spec,vP in (70b), the position would count as an Ā-position given the discussion in section 3.3 (recall that Spec,vP counts as an Ā-position when it serves as an intermediate landing site of Ā-movement). Note also that an analysis along the lines suggested in the text for *wager* may be extendable to French *croire*('believe')-class verbs, which also exceptionally case-mark a *wh*-trace but not lexical NPs. Kayne's (1984) examples like *the man whom I believe has left* could also be treated this way, with *whom* probing the matrix v for case licensing.

[63] This is not an option in English, a non-quirky-subject language.

subjects, but not under the pure EPP-driven-movement analysis. Quirky subjects are not only banned from A-moving from a cased Spec,IP, but also prohibited from moving into a caseless Spec,IP (as the final landing site), as noted by Freidin and Sprouse (1991), which also argues against the pure EPP-driven-movement analysis of quirky subjects.[64]

6.2.6 Existential Constructions Let us now look at constructions involving expletives (note that (71) is not a question).

(71) *[$_{IP}$ Is someone in the garden].

(72) [$_{IP}$ Someone is in the garden].

(73) [$_{IP}$ There is someone in the garden].

[64] It is worth noting an interesting Slavic paradigm that can be interpreted as an argument for the double case-marking analysis adopted above. As shown in (ia) and (ib), inherent case must be preserved under passivization in Serbo-Croatian (SC), but not in Russian. (The verb 'manage' assigns instrumental in both Russian and SC, as shown by (ii), where the object must bear instrumental.)

(i) a. Fabrika/*Fabrikoj upravljaet-sja našimi druz'jami. (Russian)
factory.NOM/INSTR manages-REFL our.INSTR friends.INSTR
'The factory is managed by our friends.'
(slightly modified from Franks 1995)
b. Fabrikom/*Fabrika se upravlja od strane naših drugova. (SC)
factory.INSTR/NOM REFL manages by our.GEN friends.GEN
'The factory is managed by our friends.'

(ii) a. Naši druz'ja upravljajut fabrikoj. (Russian)
our.NOM friends.NOM manage factory.INSTR
'Our friends manage the factory.'
b. Naši drugovi upravljaju fabrikom. (SC)
our.NOM friends.NOM manage factory.INSTR
'Our friends manage the factory.'

In Bošković 2006a, I relate this paradigm to certain data concerning genitive of quantification. In both Russian and SC, higher numerals like 'five' assign genitive to the following NP, the case being realized on both the demonstrative and the noun as in (iii). (Genitive is the only possibility here. See Bošković 2006a for details of the case licensing in (iii)–(iv), which is simplified here. As discussed in Bošković 2006a, the constructions may involve case-driven movement.)

(iii) a. Pet ovih djevojaka rade tu. (SC)
five these.GEN girls.GEN work here
'Five of these girls work here.'
b. Pjat' ètix devušek rabotali tam. (Russian)
five these.GEN girls.GEN worked there
'Five of these girls worked there.'

As Franks (1995) discusses, the demonstrative can move in front of the numeral in both SC and Russian, in which case it must preserve the original premovement case (genitive) in SC, as shown in (iva), while in Russian it becomes accessible for case assignment by a higher head, as shown by the fact that it bears nominative in (ivb).

(iv) a. Ovih/*Ove pet djevojaka rade tu. (SC)
these.GEN/NOM five girls.GEN work here
b. Èti/*Ètix pjat' devušek rabotali tam. (Russian)
these.NOM/GEN five girls.GEN worked there

In Bošković 2006a, I provide a uniform account of the paradigms in (i) and (iv). More precisely, I suggest that in both instances two cases are assigned to one phrase: instrumental in (i) and genitive in (iv) before movement, and nominative in both (i) and (iv) after movement. However, for morphological reasons only one can be overtly realized. SC realizes the first case (instrumental/genitive) in the constructions under consideration and Russian the second case (nominative). Under this analysis, the above data are accounted for without positing a syntactic difference with respect to case licensing in Russian and SC.

I will adopt here the Belletti/Lasnik analysis of existential constructions, according to which *there* has case and its associate bears partitive case.[65] Accounting for (73) under this analysis is straightforward. Partitive case assignment is standardly assumed to be optional (which may in fact be interpreted as another argument against the Inverse Case Filter). The option is taken in (73), but not in (72), where the subject NP moves to Spec,IP to license its structural nominative case. Now consider (71). The derivation on which the partitive case option is not taken can easily be accounted for since the case feature of *someone* then cannot be checked without a violation, as discussed above. Suppose, however, that we take the partitive case option, in which case the indefinite NP would be case-licensed by the verb (being an indefinite, the NP has the right kind of semantics for partitive case, in contrast to *John* in (57)), raising the question of why the construction is ungrammatical. Obviously, the partitive case derivation for (71) needs to be blocked. I propose that partitive case can be assigned only in the presence of *there*, hence not in (71). Given that the partitive case option cannot be taken, (71) can be accounted for in the same way as (57). Why is it that the partitive case option can only be taken when *there* is present? I propose that owing to its very nature, partitive case can be borne only by NPs, not DPs. This is responsible for the definiteness effect of existential constructions, given the natural assumption that definiteness requires presence of the DP projection.[66] However, following standard assumptions I assume that (at least in English) the traditional NP must always have the DP layer. What about (73), where the associate of *there* bears partitive case, hence must be an NP? Here I adopt the intriguing proposal made in Chomsky 1995b (for relevant discussion, see also Frampton 1997) that the expletive-associate pair is a complex DP, *there* being the DP layer, and its associate the NP part.[67] We have now accomplished what we set out to do: the partitive case option can be

[65] Note that under the partitive case analysis, existential constructions may provide additional evidence that Agree is not subject to the AC. There are a number of empirical arguments in the literature for the partitive case analysis; see, for example, Belletti 1988, Lasnik 1992, 1995, 1999, Martin 1992, Bošković 1997b, 2002a, 2003, and Epstein and Seely 1999, 2006. As discussed in these works (see especially Lasnik 1999), the associate of *there* must bear partitive case, which is also easily implementable under the complex DP analysis of the *there* + associate complex adopted below (see also Bošković 2003). (For discussion regarding which elements can license partitive case, see especially Lasnik 1992, 1995. Roughly, partitive case is available only in contexts with the verb *be* or an unaccusative verb (e.g., *There arrived someone*).) As mentioned in footnote 16, the associate may undergo overt case-licensing movement under the partitive case analysis. Note also that, as in Chomsky 2001, in the current analysis an expletive in Spec,IP would probe I (see footnote 57).

[66] Since under the current analysis, which in the relevant respect actually follows Chomsky 1995b (see the discussion below in the text), the associate of *there* in a construction like *There is a woman in the garden* is not a DP, it follows that the traditional indefinite article is not (more precisely, does not have to be) located in DP. This claim has already been made on independent grounds by several authors who otherwise adopt the DP hypothesis (see, e.g., Bowers 1987, Stowell 1989; see also Bošković, in press a, where it is shown that Slovenian lacks the category D, although it has indefinite articles (the language lacks definite articles)). Note also that in frameworks that assume a richer structure for the traditional NP, what I am calling NP could actually be a higher functional projection.

[67] If there always has to be some kind of checking relation between the D and the NP (for relevant discussion of D-N relations, see Longobardi 1994), *there* and its associate would be involved in an Agree relation. We would then be going back to a version of the expletive replacement hypothesis in that there would be a direct syntactic relation between the expletive and its associate, which is missing from Chomsky's recent analyses of existential constructions (see Chomsky 2000, 2001, 2004) though present in earlier ones (see Chomsky 1993, 1995b).

An interesting aspect of existential constructions under the current analysis is that they involve a ''scattered'' DP, where both the DP part and the NP part are case-marked. This could be a prerequisite for scattering of a DP and may

taken only in the presence of *there*. Only then is the relevant NP actually an NP, which is a prerequisite for partitive case assignment. This means that the partitive case option cannot be taken in (71), as desired. Most importantly, the paradigm in (71)–(73) is accounted for without appealing to either the EPP or the Inverse Case Filter (in particular, neither one is needed to account for the presence of *there* in (73)), in accordance with the current attempt to eliminate these mechanisms.[68]

6.2.7 Postverbal Nominatives Let us finally briefly consider how languages that allow nominative subjects to follow a verb that has not moved to C should be treated in the current system. Such subjects appear not to have moved to Spec,IP overtly; still, they receive nominative case. This seems to be unexpected under the current analysis. There are several ways of handling this situation.

1. The nominative case in question is not an uninterpretable feature, which means that it does not require movement to Spec,IP. (See Sigurðsson 2002, Svenonius 2002, Uriagereka 2002, Butt and King 2004, Bošković 2005a, and Stjepanović 2005a,b for evidence that some instances of case are not uninterpretable. In fact, traditional grammars of languages with rich case morphology are full of arguments to this effect (see also Jakobson 1936).)

2. The nominative case in question is actually a default case, hence not assigned by I. (In fact, in many languages, nominative is the default. For various approaches to default case, see McCloskey 1986, Marantz 1991, Harley 1995, and Schütze 2001, among others.) What I have in mind here is actually any analysis that would not treat nominative as a regular structural case; for an illustration of this, see also Saito's (1985) analysis of the Japanese nominative marker *-ga*, according to which it is not a regular structural case.

3. The nominative case in question is checked by a head lower than T (see Alexiadou 2003 for such an analysis of nominative subjects in several languages).

4. We are dealing here with overt movement to Spec,IP followed by pronunciation of a lower copy of the nominative NP. This analysis is very plausible for languages where the subjects in question are focused; examples are Serbo-Croatian (see Stjepanović 1999, 2003), Russian (see Bailyn 1995), and Italian (see Calabrese 1992, Belletti and Shlonsky 1995, Zubizarreta 1998). Assuming, as in Franks 1998 and Bošković 2001, 2002b, that lower-copy pronunciation is licensed only when PF considerations require it, Stjepanović (1999, 2003) argues that when the subject is focalized, PF considerations (in particular, assignment of nuclear stress, which is borne by

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account for its rarity. In Bošković 2005a, I present several other cases of scattered DPs where both parts of the scattered DP must be case-marked, which suggests that we may indeed be dealing here with a larger generalization. (For another version of Chomsky's complex-DP analysis of the *there*-associate relation, see Sabel 2000 and Hornstein and Witkoś 2003.)

[68] In work in preparation, I extend the current analysis of expletive *there* constructions to expletive *it* constructions, forcing the presence of the expletive independently of the EPP/Inverse Case Filter. The analysis is based on the proposals that clauses may have case (see Bošković 1995, Picallo 2002, Epstein and Seely 2006) and that there is an expletive-associate relation between the expletive *it* and the clause. (Tanaka (1995) and I (Bošković 1997b) argue against McCloskey 1991 in this respect. For relevant discussion, see also Epstein and Seely 2006.)

focalized elements and assigned to the most deeply embedded element in the sentence) force pronunciation of a lower copy of the subject, which has moved to Spec,IP overtly.

5. Postverbal nominatives are located in a rightward Spec,IP (see Zubizarreta 1999 regarding Spanish).[69]

I leave further exploration of these options for future research, with an understanding that it is unlikely that any one of them will account for all the nominatives in question (after all, in many respects they do not all behave the same way). Rather, the nominatives in question in different languages (or different constructions) will likely require different analyses, which means that a combination of the above options will be needed.

As for nominative objects in languages like Icelandic and Japanese, the most straightforward way of accommodating them is to assume that this nominative is licensed by a lower functional head, not by T, as argued quite convincingly by a number of authors, for example, Harley (1995), Sigurðsson (1996, 2000), McGinnis (1998b), Alexiadou (2003), and Boeckx (2003a) for Icelandic[70] and Tada (1993), Takahashi (1996), and Saito and Hoshi (2000) for Japanese. Under the current analysis, the object would be located in the Spec of the head in question. Although inactive in Chomsky's (2000) sense because its case has been checked, the object would still be able to undergo Agree with T, since the AC does not hold for Agree even as a theorem in the current system (see also the data discussed in section 5, which provide further empirical support for this claim).[71]

6.3 Wh-*Movement without the Generalized EPP*

Having discussed traditional A-dependencies, I now turn to *wh*-movement. Consider how the typology of multiple question formation would be stated in the current system, which dispenses with the Generalized EPP.[72] (In the discussion below, I ignore the uninterpretable case feature of *wh*-phrases, which would be licensed in a position lower than CP.) In a multiple *wh*-fronting language like Bulgarian, *wh*-phrases would be obligatorily specified with a uK feature, which in

[69] If there is an LF component that derivationally follows the overt-syntax component (i.e., if the one-cycle syntax model is not adopted), an option that is not favored in the current system, the nominatives in question could also be undergoing phrasal movement to Spec,IP in LF.

[70] Among other things, this analysis explains why nominative objects exhibit only partial agreement; see especially the last two works regarding this issue. Note that Koopman's (2006) split-TP analysis, under which nominative objects are located in the Spec of a lower TP, is also consistent with the current system. Furthermore, several of the analyses cited above, including Koopman's, can also easily handle multiple subject constructions within the current system.

[71] It is also worth noting here regarding Slavic nominative objects that Williams (2006) (see also Babyonyshev 1996) provides convincing evidence that nonnominative subjects of Russian nominative object constructions are actually located above Spec,TP, not even passing through Spec,TP on their way to this higher position. (Williams provides evidence for such an analysis of all Russian nonnominative subject/nominative object constructions discussed by Lavine (2000) and Bailyn (2004), based on a failure of Russian nonnominative subjects to pass certain subjecthood tests, which nominative objects in Russian and quirky subjects in Icelandic do pass.) This leaves open the possibility that nominative objects are actually located in Spec,TP in Russian (see Babyonyshev 1996 and Williams 2006 for some relevant discussion).

[72] While in the previous section I argued that the current, EPP-less approach is superior to the standard approach incorporating the EPP, the goal of this section is more modest: to show that the typology of multiple question formation can be stated without reference to the EPP.

Bošković 2002b I argue is related to focus. (For relevant discussion, see also Watanabe 2002, where it is argued that an uninterpretable focus feature of *wh*-phrases plays the same role in *wh*-movement as case in A-movement. See also Bošković 2005c for independent evidence for the uK of *wh*-phrases. I will not be concerned here with the precise identity of the feature in question, simply referring to it as F.) Hence, they would all undergo Ā-movement. Although we cannot really tell whether the corresponding F-feature of the target is interpretable or uninterpretable, for the sake of uniformity with the languages discussed below I will assume that it is uninterpretable, which would then be the case for all languages.[73] In a *wh*-in-situ language like Korean, the F-feature of *wh*-phrases would be interpretable, which means that *wh*-phrases would remain in situ, undergoing Agree with the relevant head. Notice that this is another case where the AC does not hold for Agree (as well as another illustration of the insensitivity of Agree to the PIC).[74] As for English, we can capture it if English *wh*-phrases optionally have the uninterpretable feature uF, with the further assumption that English [+wh] C does not allow more than one Spec, assumptions that are necessary under Chomsky's (2000, 2001) analysis as well.[75] A consequence

[73] A survey of the relevant literature reveals that it is not completely clear what the head in question is and whether it is the same head in all languages (there are even dissenting voices regarding the standard claim that the head in question is C in English). I will therefore leave the precise identity of the head open. I will, however, assume that the head in question is C in English (primarily for ease of exposition).

[74] A word is in order regarding the hotly debated issue of how to treat, within the Minimalist Program, what was considered LF *wh*-movement in the GB framework. There are several options here: (a) keeping phrasal covert movement (see Groat and O'Neil 1996, Pesetsky 1998, 2000, Nissenbaum 2000, and Richards 2001 for various instantiations of this analysis within the Minimalist Program); (b) replacing it with Move F; (c) replacing it with Agree; (d) replacing it with unselective binding. It would be far beyond the scope of this article to try to determine which is the proper way to treat the traditional LF *wh*-movement. Here, without discussion, I simply adopt option (c), Agree, for the *wh*-phrases under consideration. (However, I believe that the current system can be adjusted to accommodate other approaches.)

[75] In Chomsky's system, *who* would need to have the feature uF in *Who did she say that he gave the book to?* (otherwise, it could not undergo *wh*-movement), but it would not have it in *What did she say that he gave to who?* (the feature could not be checked because of the PIC, which for Chomsky constrains Agree).

Note also that any analysis needs to state the fact that Bulgarian allows, and English does not allow, multiple Specs of C. I hope the distinction will eventually prove to be capturable in a deeper way than the one suggested in the text. One possibility under the current analysis is to assume that the feature of C that checks the uF feature of a *wh*-phrase disappears (erases and deletes in Chomsky's (1995b) terms) after first checking in English, but not in Bulgarian. If we assume the necessity of something like Higginbotham and May's (1981) absorption for proper interpretation of multiple questions, another possibility may be that multiple *wh*-phrases located in Spec,CPs (*not* in situ) in English cannot undergo absorption, whereas this would be possible in Bulgarian. (I am departing here from Higginbotham and May 1981.) Under this analysis, multiple *wh*-fronting questions in English would be ruled out for semantic rather than syntactic reasons. (Notice also that assuming that positive evidence is required for the multiple-absorption-in-Spec,CP parameter setting, positive evidence for learning the Bulgarian/English distinction would be easily available.) There is also independent evidence that Bulgarian *wh*-phrases in interrogative Spec,CPs are unusually free with respect to possibilities for absorption, which suggests that the proper way of stating the crosslinguistic difference with respect to absorption is as follows: either a language doesn't allow additional *wh*-phrases in Spec,CP to undergo absorption at all, or such *wh*-phrases are free to undergo absorption in any Spec,CP. Thus, Dayal (1996) observes that the second embedded *wh*-phrase in (i), which is located in the embedded interrogative Spec,CP under the standard analysis of Bulgarian questions, can take either matrix or embedded scope; that is, it can be absorbed either with the embedded or with the matrix *wh*-phrase.

(i) Koj znae kakvo kade e kupila Mariya?
who knows what where is bought Maria
'Who knows where Maria bought what?'

For another perspective regarding the Bulgarian/English difference with respect to multiple *wh*-fronting, see Pesetsky 2000. Under Pesetsky's analysis, like Bulgarian, English allows multiple Spec,CPs in the syntax, but, unlike Bulgarian, it does not allow more than one Spec,CP to be pronounced in PF.

of the above assumptions regarding English is that exactly one *wh*-phrase will *always* move to Spec,CP in English questions. Consider, for example, the following sentences:

(74) I wonder what John bought.

(75) *I wonder John bought what.

There are two options here, depending on whether or not *what* has the relevant uK feature, namely, uF (recall that since English is not a *wh*-in-situ language, *what* cannot bear iF). If *what* in (74)–(75) has the uF feature, it will have to move to Spec,CP so that it can check the feature by probing the interrogative C. This derivation then yields (74). If *what* does not have the uF feature, it will remain in situ, yielding (75). However, this derivation is ruled out because the uF feature of the interrogative C cannot be checked. The feature is checked against *what* in (74). However, this is not an option in (75) because *what* does not have the uF feature.

The current analysis also bears on the controversial issue of whether subject *wh*-phrases in constructions like (76) undergo movement to Spec,CP (for recent discussion, see Agbayani 2000, Pesetsky and Torrego 2001, Boeckx 2003b, An 2007).

(76) Who left?

Under the current analysis, *who* in (76) in fact must move to Spec,CP. There are two derivations to consider, depending on whether or not *who* has the uF feature. If *who* has the uF feature, it will move to Spec,CP so that it can probe the C. On the other hand, if *who* does not have the uF feature, it will not move to Spec,CP. However, since the uF feature of C remains unchecked, this derivation cannot yield a legitimate output. The current analysis thus leads to the conclusion that *who* in (76) must move to Spec,CP, as argued by Pesetsky and Torrego (2001), Boeckx (2003b), and An (2007).[76]

To summarize, a consequence of the assumptions regarding English adopted above, which are also necessary in Chomsky's (2000, 2001) system, is that exactly one *wh*-phrase will *always* move to Spec,CP in English questions. Most importantly, there is no need to give the interrogative

[76] Notice that *Who left what?* would have the following legitimate derivation in the current system: *who* (with uF) and the C check their F-features against each other, while *what* does not have the uF feature.

The current analysis may also explain the contrast between the Korean counterpart of *John left why (John-i way ttena-ss-ni* 'John-NOM why leave-PAST-Q'), which is acceptable with *way* 'why' in situ, and English **Who left why?* As discussed above, in Korean, the C undergoes Agree with *way* 'why' for the F-feature. This Agree relation is not an option in English for reasons discussed above. If a [+wh] C must have some kind of relation with each *wh*-phrase, which seems plausible (see Bošković 2000), we may then have to fall back on unselective binding in the English case. The English example is then ruled out because, as is well known, adverbs cannot be unselectively bound (see Tsai 1994, Reinhart 1995). The problem does not arise with *what* in *Who left what?*

Note also that I assume that only the interrogative C can check the uF feature of *wh*-phrases. Example (4) is then ruled out either because the uF feature of *what* remains unchecked since it does not c-command an interrogative C (if *what* has the uF feature in question) or because there is no reason to move *what* to the Spec of *that* in the first place (if *what* does not have the uF feature). Regarding partial *wh*-movement languages, it is possible that in partial *wh*-movement constructions, the declarative C can check the uF feature of *wh*-phrases. Under some analyses, the ''declarative'' clause hosting partial *wh*-movement is actually treated like a question, that is, a [+wh] CP (see Dayal 1996, Stepanov 2001, Stepanov and Stateva 2006). Under this approach, there is really nothing special about partial *wh*-movement in the relevant respect, since the partially moved *wh*-phrase actually undergoes movement to a [+wh] CP, undergoing feature checking with the head of the CP. Alternatively, it is possible that a different feature is involved in partial *wh*-movement from the one we are concerned with here.

C in English an EPP property to force movement to Spec,CP, a conclusion that is in line with the current proposal that the EPP be dispensed with. The pattern of crosslinguistic variation regarding the properties of *wh*-phrases with respect to the F-feature is summarized in (77). (Recall that the F-feature of the target is uninterpretable for all languages. Notice also that it is not out of the question that in some languages *wh*-phrases optionally bear iF. Such languages would still be *wh*-in-situ languages.)[77]

(77)	Bulgarian *wh*-phrases	Korean *wh*-phrases	English *wh*-phrases
	uF	iF	(uF)

To summarize the discussion in this section, I have argued that the Generalized EPP can be dispensed with, as can the Inverse Case Filter. Generalized EPP effects (and Inverse Case Filter effects) follow from the AC, which itself follows from something else. Under the analysis adopted here, generalized EPP effects follow from a property of the moving element, which is in line with the shift in the current system to moving-element-driven movement, as opposed to target-driven movement. Stating the generalized EPP effect as a property of the moving element has also enabled us to analyze without lookahead constructions where we need to know whether overt movement will take place before its target enters the structure. The gist of the lookahead problem that arises under the EPP-driven movement approach is that the EPP diacritic indicating that Y moves is placed on W, but Y often needs to move (i.e., start moving) before W enters the structure. The problem does not arise in the system adopted here, where movement is moving-element driven.

Notice also that, under the analysis adopted here, in the configuration in (78), where X asymmetrically c-commands Y and X and Y are involved in K-feature checking, giving an uninterpretable feature uK to Y (i.e., marking the K-feature of Y as uninterpretable) will always result in Y moving to XP; that is, it will result in Move. On the other hand, giving uK *only* to X (i.e., marking only the K-feature of X as uninterpretable) will always lead to pure Agree.

(78) X . . . Y

The system thus puts strong restrictions on when we have Move and when pure Agree. The restrictiveness should be taken as a conceptual argument in its favor.

7 Conclusion

I have proposed a new approach to successive-cyclic movement, which reconciles the early and the current minimalist approaches. As in the early approaches, there is no feature checking in

[77] There is also an alternative analysis on which English *wh*-phrases (in fact, *wh*-phrases in all languages) would always have the F-feature, but the feature would be optionally uninterpretable or interpretable in English (uF or iF; on this analysis, English would have both the Bulgarian and the Korean option at its disposal). Since on this analysis *what* in (75) may have the iF feature, hence can check the uF feature of C while remaining in situ, to force *wh*-movement (and rule out (75)) we need to appeal to Cheng's (1997) clausal typing hypothesis, on which *wh*-questions in which *wh*-movement does not occur overtly in English are filtered out because the relevant clause fails to be typed as interrogative. (On Cheng's analysis, in *wh*-in-situ languages *wh*-movement is not necessary to type a clause as interrogative.) Under the analysis presented in the text, however, it is not necessary to adopt the clausal typing hypothesis. The choice between the analysis presented here and the analysis presented in the text may therefore boil down to the validity of the clausal typing hypothesis, an issue that cannot be resolved here.

intermediate positions (i.e., in intermediate landing sites of successive-cyclic movement). However, as in the current approaches and unlike in the early minimalist approach, successive-cyclic movement starts before the final target of movement enters the structure, and Form Chain has been eliminated. I have used the Activation Condition to implement successive-cyclic movement. However, I have argued that there is no need to posit the Activation Condition as an independent principle of the grammar. More generally, the following mechanisms/principles can be eliminated from the grammar (some of them still follow empirically as theorems; in particular, the Phase Impenetrability Condition and the Activation Condition hold, but only for Move, not Agree):

- the Activation Condition,
- the Phase Impenetrability Condition and phases as locality domains of syntax,
- the Generalized EPP (the ''I need a Spec'' property of attracting heads), and
- the Inverse Case Filter.

The resulting system is characterized by strong restrictions regarding when a feature is checked by Move and when by pure Agree, Move being moving-element driven and Agree target driven. The system also resolves a lookahead problem that arises under the EPP-driven-movement approach, where the EPP diacritic indicating that X moves is placed on Y, not X, although X often has to start moving before Y enters the structure. I have also explored consequences of the Activation Condition/Phase Impenetrability Condition–free conception of Agree, providing several empirical arguments in its favor. Finally, I have proposed an account of existential constructions that does not appeal to either the EPP or the Inverse Case Filter as well as an account of the typology of multiple question formation that does not appeal to the Generalized EPP, in line with the current attempt to eliminate the Generalized EPP and the Inverse Case Filter from the grammar.

Appendix: More on Successive-Cyclic Movement

Several of the arguments given in Bošković 2002a and Boeckx 2003b for the empirical superiority of a Takahashi (1994)–style analysis over Chomsky's (1995b, 2000, 2001) feature-checking-in-intermediate-positions locality systems do not simply involve arguments *against* feature checking in intermediate positions, which is also a characteristic of the current analysis; they also involve arguments *for* the operation Form Chain. Since the analysis proposed here follows Chomsky's analysis in not assuming Form Chain, the arguments in question raise a potential problem for both analyses. In this appendix, I address one argument given in Bošković 2002a, showing how the relevant data can be handled in the current system.[78]

The argument involves the paradigm in (79)–(80), which illustrates the impossibility of intermediate preposition (P) stranding. (I indicate only the original traces in (79)–(80).)

[78] Boeckx (2003b) gives an argument based on *wh*-movement out of passive/ergative subjects. Since the grammaticality status of such extraction is apparently controversial (for example, Collins (1994) and Boeckx (2003b) consider it unacceptable and Chomsky (in press) considers it acceptable), I will not discuss it here. See Bošković 2005b:66–68 for relevant discussion.

(79) a. [In which garage]$_i$ do you think [$_{CP}$ that John found that car t_i]?
b. [Which garage]$_i$ do you think [$_{CP}$ that John found that car in t_i]?

(80) *[Which garage]$_j$ do you think [$_{CP}$ [in t_j]$_i$ [(that) John found that car t_i]]?

In Bošković 2002a, I observe that under Chomsky's (2000) approach to successive cyclicity, which ties successive-cyclic movement to a property of intermediate heads and considers each step of successive-cyclic movement a separate operation, it is difficult to account for (80), more precisely, the contrast between (79b) and (80). It seems that (80) is incorrectly ruled in.[79] On the other hand, accounting for these data under the Minimize Chain Links Principle (MCLP) approach is straightforward, given that Last Resort applies to chain formation (i.e., Form Chain) and that there is no feature checking in intermediate positions (i.e., the embedded declarative C does not establish a feature-checking relation with a *wh*-phrase). In the MCLP analysis, *wh*-movement in (79) takes place after the matrix C, which drives the movement, enters the structure. The chain starting in the original position of the *wh*-elements (PP in (79a) and NP in (79b)) and finishing in the matrix Spec,CP is then formed, formation of the chain being driven by feature checking with the matrix C, thus conforming to Last Resort. The MCLP forces the movement to proceed via the intermediate Spec,CP, but no feature checking takes place in this position. In contrast to (79), (80) does not involve formation of just one chain. Rather, we are dealing here with two separate chains: one involves movement of the PP to the embedded Spec,CP, and the other involves movement of the *wh*-phrase, an NP, from inside the PP to the matrix Spec,CP. Given that there is no feature checking with the embedded declarative C, formation of the first chain violates Last Resort. The contrast between (79b) and (80) is thus accounted for under the MCLP analysis.

Although the current analysis does not posit feature checking in intermediate positions, it does not assume Form Chain either. As a result, movement to intermediate positions does have its own motivation. This means that the Last Resort problem that (80) raises for Chomsky's (1995b, 2000, 2001) analyses would also arise under the current analysis. Before we look at how the current system can account for the data in (79)–(80), recall that the Form Chain account of (80) does face a problem in that it incorrectly rules out (7), repeated here as (81), where quantifier float breaks chain formation in an intermediate position, which does not involve feature checking. Yet, unlike stranding of the preposition in (80), stranding of the quantifier in (81) is possible (see section 3, including footnote 5, for relevant discussion of (7)).

(81) What$_i$ did he say [$_{CP}$ [all t_i]$_j$ that he wanted t_j]?
(McCloskey 2000)

Returning to (79)–(80), suppose that the ''percolation'' of the [+wh] feature is instantiated as follows: The relevant feature uK that is involved in the element undergoing *wh*-movement can

[79] Note that movement out of Spec,CP generally yields a weak violation in English. In this respect, note the contrast between ?*Who$_i$ do you wonder which picture of t_i Jane bought?* and strongly ungrammatical (80), both of which involve extraction of a complement of P from Spec,CP.

be located either in the P, in which case the whole PP must undergo movement (as in (79a)), or in its complement NP, in which case the NP must move alone, stranding the P (as in (79b)), given the preference to carry as little material as possible under movement (see Chomsky 1995b, Stateva 2002, Bošković 2004a). Turning to (80), to make it possible for the whole PP to undergo movement to the intermediate Spec,CP, uK would have to be located in the P (if it were located in the complement of the PP, movement to the intermediate Spec,CP would have to strand the P). But then, moving the NP complement alone after the PP moves to Spec,CP is impossible. The relevant feature uK is not present on the NP to drive the movement, and the uK of the P would remain unchecked since it could not function as a probe (it would not c-command its checker). I therefore conclude that (80) can be accommodated in the current system, which does not assume either intermediate feature checking or Form Chain (see Bošković 2004a for another analysis of (80)).

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Department of Linguistics, U-1145
University of Connecticut
Storrs, Connecticut 06269

zeljko.boskovic@uconn.edu