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On the locality and motivation of Move and Agree: An even more minimal theory*

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1 Introduction

The goal of this paper is to investigate the locality and motivation of Move and Agree. The investigation will also lead us to reach 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's (2000, 2001), that the locality of the two is radically different,¹ Agree being free from several mechanisms that constrain movement, in particular, Phases/Phase-Impenetrability Condition and the Activation Condition. However, the difference in the locality of Move and Agree will not be stipulated—it will be shown to follow from independently motivated assumptions.

My point of departure in the discussion of the locality of Move will be a comparison between early and current minimalist approaches to successive cyclic movement. In early Minimalism (cf. Chomsky and Lasnik 1993 and Takahashi 1994), successive cyclic movement was not driven 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

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¹See also Bošković (1998) and Bobaljik and Wurmbrand (2005).

²Thus, 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, no movement of X would take place until Y enters the structure.

particular chain links, whose creation is licensed by the Minimize Chain Links requirement.

By contrast, later approaches to successive cyclic movement (for example, 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 look-ahead problem: sometimes when doing successive cyclic movement on cycle *X*, we need to know what will happen on a higher cycle *Y*.

In this paper I will propose a new account of successive cyclic movement, applicable to both A'- and A-movement, which reconciles the two existing approaches to successive cyclic movement. We will see that there is considerable evidence that successive cyclic movement does not involve feature checking with intermediate heads (see also Bošković 2002a, Boeckx 2003a, and Chomsky in press). As a result, like the Minimize Chain Links Principle (MCLP) analysis, and in contrast to the current, feature-checking approach to successive cyclic movement, the theory developed in this paper will not rely on feature checking in intermediate positions of successive cyclic movement. However, in line with the current approach and in contrast to the MCLP analysis, 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, i.e., I will be adopting early successive cyclic movement. However, it will be shown that the look-ahead 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 the analysis to be proposed in this paper. Chomsky's (2000) Activation Condition (AC), which requires that an element undergoing Movement/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 the AC should be used only to implement successive cyclic movement. This move will enable me to actually dispense with the AC as an independent condition of the grammar—its effects will be shown to follow as a matter of theorem. The AC effects, which are involved in the implementation of successive cyclic movement, will also enable me to eliminate the Generalized EPP mechanism, which is in Chomsky's (2000, 2001) system 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. The Inverse Case Filter, i.e. the requirement that traditional Case assigners assign their case (cf. Bošković 1997b, 2002a, Epstein and Seely 1999), will also be shown to be eliminable. The analysis of the driving force of A-movement presented in this paper will crucially rely on the traditional Case Filter, which under various guises has been assumed throughout the GB and the Minimalist frameworks (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, on the other hand, will be argued to be target-driven. The resulting system will put 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 lead to 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 *phase* as a syntactic locality domain and the PIC should be eliminated, successive cyclic movement being forced by phonological considerations. If phases/PIC are phonological in nature, they should be irrelevant to Agree, which under the view of feature checking adopted below does not affect pronunciation. The AC will also be tied to the

nature of overt movement, i.e. pronunciation. As a result, the AC will also be argued not to affect Agree, in contrast to Move.

As should be clear from the brief summary given above, the paper has a number of goals. Attempting to resolve all questions that could arise regarding the issues investigated in the paper would be way too ambitious. As a result, I will often confine myself to pointing out what seem to be promising directions for research, leaving some obvious problems unresolved (i.e. putting them aside for future research).

The paper is organized as follows. In section 2 I discuss the two previous approaches to successive cyclic movement briefly summarized above: 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 A'-movement. In section 4 I develop a new theory of successive cyclic movement, which, as noted above, reconciles the two existing approaches to successive cyclic movement, combining what seems to me to be the best aspects of the two approaches. This section also argues for elimination of the AC as an independent condition. Section 5 provides evidence that phases/PIC do not constrain Agree and argues for elimination of the PIC and phases as syntactic locality domains. Section 6 argues for elimination of 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. In sections 4-6 I will 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 of *that* in (1), which is a step in the formation of a larger chain that involves checking of 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) Minimize Chain Links Principle (MCLP). (Takahashi's approach has been revived recently in Bošković 2002a, Boeckx 2003a, 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. The 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 SpecCP (an A'-position) on its way to the matrix SpecCP (also an A'-position). Bošković (2002a) observes that the same holds for intermediate A-movement. Thus, the MCLP forces *the students* in (2) to pass through the embedded SpecIP on its way to the matrix SpecIP.³

(2) The students_i seem [t_i to have t_i liked French].

Under the MCLP analysis, the intermediate SpecCP and SpecIP 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

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

(2002a), the Last Resort analysis of (4) can be extended to (5), if we assume that movement to the Spec of raising infinitives (cf. (2) and footnote 3) 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 Form Chain operation. 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 must have a feature-checking motivation, not formation of chain links. 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 SpecCP (I ignore here other intermediate landing sites). The Last Resort Condition is satisfied since the formation of the whole chain, whose head is located in the matrix SpecCP, 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 the operation Form Chain. One consequence of this move is that formation of each chain link has to satisfy Last Resort and the Cycle. Regarding (1), this means that movement of *what* to the intermediate SpecCP has to involve feature checking, otherwise, the Last Resort Condition would be violated. It also has to extend the tree, which means that the movement has to happen before higher structure is built. In other words, in contrast to 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. Chomsky's (2000) analysis is based on

the notion of *phase*, which is similar to the pre-minimalist 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 due to the Phase-Impenetrability Condition (PIC), which says that only the head and the Spec of a phase are accessible for movement to a position outside of 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 outside of the phase. Regarding complementizer *that*, Chomsky assumes that CPs are phases and that *that* may, but does not have to, have the EPP property. (3) instantiates the no EPP property option. As for (1), although in principle *that* does not have to 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 SpecCP so that *what* can later be moved outside of the CP. This is accomplished by giving *that* the EPP option. If *that* is not given the EPP option, *what* would not move to the embedded SpecCP, as a result of which it could not move outside of the embedded CP due to 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 SpecYP is preceded by the 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 Chomsky 1995b and Chomsky 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, considering each step of successive cyclic movement a separate operation. (As noted above, the MCLP analysis divorces movement through intermediate SpecCPs from C, i.e., it does not consider it to be a result of a property of C, but the movement itself, and does not consider each step of

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

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 have chosen the EPP option for *that*, which results in movement of *what* to the embedded SpecCP, 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) was 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 Specifiers 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), which 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 non-true EPP heads (i.e. heads that do not always require a Spec) conditioned on it being required to permit successive cyclic movement. The embedded clause head in (1) can then be assigned the EPP property, since this 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 permit successive cyclic movement. Under this analysis, movement through the Spec of a non-true 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 look-ahead. 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 SpecCP, *that* has to be given the EPP feature at the point when the embedded

clause is built. But at that point we do not know whether the assignment of the EPP feature will be needed to make successive cyclic movement possible. We will know this only after further expansion of the structure. If the structure is expanded as in (4), it will not be needed, hence disallowed, 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. The look-ahead raises a conceptual problem for the analysis. As discussed above, the problem does not arise under the MCLP analysis. However, it needs to be pointed out that the very fact that the MCLP analysis requires adopting the operation Form Chain, while the phase analysis as well as Chomsky's (1995b) analysis allow elimination of the mechanism, 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 family of 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 noting here an argument against the MCLP analysis noted by Cedric Boeckx (p.c.), 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 SpecCP) which under the MCLP analysis cannot trigger the Form Chain operation for reasons discussed above with respect to (4).⁵

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

Putting aside the look-ahead problem and the quantifier float data, recall that an important distinction between the Chomsky (1995b)/Chomsky (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. Bošković (2002a) and Boeckx (2003a), who argue for a return to the MCLP analysis (see also Chomsky in press), provide a number of arguments against feature checking in intermediate positions. Both Bošković and Boeckx provide evidence to this effect regarding A'-movement, and Bošković also provides 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 briefly summarize only several arguments from Bošković (2002a), adding a couple of new arguments. I will also argue that successive cyclic A- and A'-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 SpecCPs and SpecIPs

3.1 Ellipsis

One argument for the lack of feature checking in intermediate SpecCPs 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 Spec-Head agreement (SHA), i.e. feature-checking. Thus, (8) shows that tensed INFL, 's, and +*wh*-C, which according to Fukui and Speas (1986) undergo SHA, license ellipsis, whereas the non-agreeing functional categories *the* and *that* do not.⁷

⁶I will state the argument in terms of Chomsky's (1995b) system, which relies on Spec-Head agreement, but, as noted below, the argument also extends to Chomsky's (2000) system.

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

- (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 be readily accounted for if passing through an intermediate SpecCP does not imply feature checking, i.e. SHA, with the C. The ungrammaticality of (9) should then be taken as evidence against the feature-checking view of successive cyclic movement, on which C/*that* would undergo SHA in (9). Under this view, examples in (9) are incorrectly expected to pattern with (8)d rather than (8)e.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, (9)a-b are incorrectly predicted to be acceptable since the declarative

⁸Appealing 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 the SHA would take place before the root-clause structure is built.

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 approach to successive cyclic movement, where the movement to the intermediate SpecCP is forced by the MCLP, not a feature-checking requirement, therefore no 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 non-control infinitival Is. As discussed in Martin (1996, 2001) (see also Bošković 1997b, Koizumi 1995, and 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 (10) is checked for null Case by the infinitival I, *to*, hence must undergo SHA with *to*.

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

¹⁰A question arises how to handle languages that are assumed to have overt reflexes of agreement with intermediate heads under wh-movement. As pointed out in Boeckx (2003a, 2004), it is actually far from clear that there are any languages that have true intermediate wh-agreement, i.e. overt reflexes of agreement between intermediate heads and wh-phrases. As noted by Boeckx 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, what we find is a situation where wh-movement induces special agreement between intermediate verbs and intermediate complementizers. I refer the reader to Bošković (in press b) and Boeckx (2004) for comprehensive analyses of traditional wh-agreement that does not involve any feature checking between intermediate Cs and wh-phrases which includes more recalcitrant cases like Kinande. (Schneider-Zioga 2005 in fact gives pretty much 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 the wh-phrase does not undergo movement in such constructions, hence cannot be probed (for agreement) by the intermediate C.)

(10) a. John was not sure he could leave, but he tried [_{IP} PRO_i [_{I'} to ~~*t_ileave*~~]].

b. Mary wanted to be available, but she didn't really tried [_{IP} PRO_i [_{I'} to ~~*be t_iavailable*~~]].

Significantly, Koizumi (1995), Martin (1996, 2001), Bošković (1997b), and Epstein and Seely (1999, 2006) observe that VP ellipsis is not possible in ECM infinitives, which have been argued by many authors to involve overt object shift (i.e. overt movement to SpecAgroP/SpecvP), an assumption that I also adopt here (for arguments for overt object shift and relevant references, see section 6.2.2. (cf. also examples (12) and (31)).¹¹

(11) a. *John believed Mary to be available but I don't believe [_{AgroP} her_i [_{IP} t_i [_{I'} to ~~*be t_iavailable*~~]]]

b. *John believed Mary to know French but I don't believe [_{AgroP} her_i [_{IP} t_i [_{I'} to ~~*t_iknow French*~~]]].

Under the overt object shift analysis, *her* in (11) moves to the matrix SpecAgroP/SpecvP, passing through the infinitival SpecIP. In this respect, note the possibility of quantifier float in (12), which, as discussed in Bošković (1997b), under Sportiche's (1988) analysis of quantifier float indicates that the ECM subject indeed moves overtly to the matrix clause, passing through the infinitival SpecIP.

(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 SpecIP. As noted above, Bošković (2002a) argues that, like the movement of *what* through the intermediate SpecCP in (9),

¹¹Although 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 ECM and control infinitives, which needs to be accounted for (see in this respect the discussion in Martin 2001:154).

movement of *her* through the infinitival SpecIP in (11) is forced by the MCLP, not a feature-checking requirement (cf. footnote 3). As a result, no SHA with *to* takes place in (11) in spite of *her* passing through the embedded SpecIP.¹²

3.2 On the “defectiveness” of intermediate heads

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

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

Chomsky adopts the Activation Condition, 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 feature-checking relation, the uninterpretable feature K of Y is checked off, which happens after movement of Y to SpecXP. The working of the system is illustrated with respect to (14), where under Chomsky’s (2000) analysis, the 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 SpecCP, is checked off as a reflex

¹²It 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) above, the control variants, whose infinitival complement’s SpecIP is filled by PRO, allow VP ellipsis. The reader is referred to 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*~~.

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

of the primary feature-checking relation.¹⁴

(14) I wonder what_i C Mary bought t_i .

$i\text{wh}$ $\bar{u}\text{wh}$

$u\text{Q}$ EPP

The existence of successive cyclic movement has forced Chomsky 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 off the feature of the goal that has made the goal visible for agreement and movement to the head in question. Intermediate C in (15)a is an example of a defective head—the relevant checking operations would look something like (15)b.

(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]

$i\text{wh}$ $\bar{u}\text{wh}$

$u\text{Q}$ 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 off the Q feature of the wh-phrase, so that the wh-phrase is still active for movement and agreement.¹⁵ Notice now that under the MCLP

¹⁴The analysis given here is in a slightly modified form from Bošković (2005c), who presents independent evidence that the Activation Condition holds for wh-movement (in fact, all A'-movement), i.e. for the existence of an uninterpretable feature of wh-phrases that is checked off after wh-movement in (14) (see also Watanabe 2002).

¹⁵Note that if a +wh-C is merged in the matrix clause of (15)b, if there are no phases in between the matrix C and the wh-phrase in the embedded SpecCP, the +wh-C would be able to check off the uQ feature of *what* (even if another wh-phrase is present in the matrix clause, given Hiraiwa's 2002 Multiple Agree, adopted in Chomsky 2004). If there is a νP phase in the matrix clause, the matrix C would not be able to check off the uQ feature of *what* in the embedded SpecCP. We may then be able to rule out constructions where *what* remains in an intermediate SpecCP. This, however, does not resolve the issue of how to handle wh-phrases that stay in intermediate Specs. The

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 off 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 being eliminable.

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 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 successive cyclic A-movement argued for in section 3 (see the discussion in the next subsection).

3.3 Existential constructions and the A/A' successive cyclic movement parallelism

Above, we have seen three arguments against feature-checking in intermediate positions of wh-movement (more precisely, intermediate SpecCPs), one based on ellipsis, one based on feature-

problem now arises with respect to the derivation in which *what* moves to the matrix SpecvP, 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 in mind the discussion in this footnote if the vP phase is brought into the relevant derivations.

incompatibility between *wh*-phrases and declarative complementizers, and one based on putative defectiveness of intermediate Cs, as well as two arguments against feature checking in intermediate positions of A-movement (i.e. intermediate SpecIPs) based on ellipsis and the defectiveness of intermediate I.

Additional (and the strongest) evidence against feature checking in intermediate SpecIPs (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 a question arises why the requirement cannot 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 SpecIP in order to satisfy the EPP. We have two possibilities for doing this in (17). We can either insert *there*, which is present in the numeration, into SpecIP or we can move the indefinite to this position. Chomsky argues that lexical insertion is a simpler operation than movement. Therefore, the possibility of expletive insertion into the embedded SpecIP, which for Chomsky takes place in (17)a, blocks the indefinite movement to the embedded SpecIP, which takes place in (17)b. Bošković (2002a), Grohmann, Drury, and Castillo (2000), and Epstein and Seely (1999, 2006), however, observe several problems with the Merge-over-Move account. Consider first the following construction from Grohmann, Drury, and Castillo (2000), attributed to Juan Romero and Alec Marantz (see also Epstein and Seely 1999, Frampton and Gutmann 1999, and Nunes and Uriagereka 2000), where the indefinite has apparently moved to SpecIP 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 (19)a 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 for Chomsky). As a result, the expletive should be available for lexical insertion at the point when the indefinite undergoes movement in (19)a. Given the Merge-over-Move preference, the possibility of expletive insertion should block indefinite movement. As a result, (19)b should block (19)a (i.e., (19)b should be grammatical and (19)a ungrammatical).

Consider now (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 SpecIP. Given the Merge-over-Move preference, the latter should block the former. As a result, we cannot derive (20). Chomsky

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

(1995a) observes that the derivation on which *Mary* is introduced into the embedded SpecIP eventually violates the θ -Criterion under (under his assumptions; see Nunes 2004 for another problem). However, we need look-ahead to take advantage of this to rule out the derivation in question. To avoid look-ahead, Chomsky (2000) proposes the condition that arguments can be merged only in θ -positions. The condition blocks the unwanted derivation for (20) without look-ahead. However, Epstein and Seely (1999:48-50) point out several problems with this condition. For one thing, the condition is massively redundant. For example, the condition unnecessarily rules out (21), which is plausibly already ruled out because it is uninterpretable, i.e. because the presence of *John* induces a Full Interpretation violation. (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.

Based on these problems, Bošković (2002a), Epstein and Seely (1999, 2006), and Grohmann, Drury, and Castillo (2000) argue that the Merge-over Move preference should be abandoned.¹⁷ If the preference is abandoned a question arises how the data in (17), especially the ungrammaticality of (17)b, can be accounted for. Notice, however, that (17)b 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 (17)b can be easily accounted for: there is no reason to move the indefinite to the embedded SpecIP, hence the movement is blocked by the Last Resort Condition. Note, however, that, as indicated by the possibility of quantifier float in the following construction, movement to

¹⁷It is worth noting here that the Merge-over-Move account of (17)b (more precisely, the contrast between (17)b 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.

a higher, finite SpecIP still proceeds via intermediate infinitival SpecIPs:¹⁸

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

However, as discussed above, this can be accomplished without a feature-checking relation with an intermediate head (see the discussion of (2)). 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 both intermediate SpecCPs and intermediate SpecIPs are filled only when an element generated in a lower position moves to a higher SpecCP/SpecIP. Such an element must move via intermediate SpecCPs/ SpecIPs as a result of successive cyclic movement. This is the case in (23) and (25). However, when this condition is not met, intermediate SpecCPs/SpecIPs are not created. This is

¹⁸See Bošković (2002a) and references therein for additional evidence to this effect. Here, I briefly summarize one argument based on (ia-b), taken from Grohmann, Drury, and Castillo (2000), who attribute the data to Danny Fox (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].

While 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 of the experiencer PP.) The ungrammaticality of (ib) immediately follows if the matrix subject passes, in fact must pass, through the embedded clause SpecIP on its way to the matrix SpecIP. (ib) then exhibits a Specified Subject Condition effect. The experiencer is attempting to bind the anaphor across a closer binder, namely the trace in SpecIP (iib). The problem does not arise in (ia), where the anaphor is bound by the closest subject (ia).

- (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 it is argued that traditional expletive raising constructions do not involve raising at all, expletive being generated straight in its surface position. Under this analysis, in contrast to (ib), the SpecIP of the infinitive embedded under *seem* is not filled in (iii). As a result, not having a subject the infinitive does not “close” the binding domain in (iii), in contrast to (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).

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 SpecIPs 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/SpecCPs and intermediate Is/SpecIP are treated differently: while intermediate SpecCPs 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 Spec, i.e. to always be subject to the filled Spec (the EPP) requirement. Under the above analysis, this is not the case. Under this analysis, intermediate Cs/SpecCPs and intermediate Is/SpecIPs are treated in 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) the IP counterpart of (24).¹⁹ In Bošković (2002a) I give a number of empirical arguments that the intermediate SpecIP 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 SpecIP. 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 straight in its surface position. As shown in Bošković (2002a), locality violations with A-movement are routinely voided

¹⁹The reader is referred to 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. In this respect, see the discussion of ECM and raising infinitives below, where it is shown that a similar analysis is applicable to them).

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-specifier) across an A-specifier.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.’

²⁰See the above references as well as Boeckx (2000b), Collins (2005), Stepanov (2002), and Torrego (1996), 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): in contrast to (27)a-b, (28)a-b do not involve A-movement across an A-specifier. In other words, in contrast to the matrix subject in (27)a-b, the matrix subject in (28)a-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 SpecIP across the experiencer, hence the contrast with (28). The contrast between (29) and (28) thus provides a confirmation of 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 SpecIP, which means that intermediate SpecIPs in traditional expletive raising constructions are not created (i.e. the EPP does not hold of

²¹The reader is referred to Bošković (2002a) for discussion of an interfering factor that arises in Spanish.

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 SpecCP rather than SpecIP, in which case we would have a complete parallelism between successive cyclic wh-movement and successive cyclic NP-movement. Thus, the intermediate trace in (25) would then be located in SpecCP, 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, SpecCP would not always have to be treated like an A'-position when it is a landing site of successive cyclic movement, just like SpecvP 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 stop by SpecvP (in the case of multiple movement out of vP,

²²This 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 SpecIP 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, works as a probe. The expletive should work 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 Activation Condition, 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.

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

multiple Specs of ν P are created.) It is tacitly assumed that the status of a Spec ν P with respect to the A/A' distinction depends on the nature of the movement that stops by Spec ν P: if we are dealing with A-movement, the Spec ν P created by the movement counts as an A-position, and if we are dealing with A'-movement (as in the case of, for example, wh-movement of adjuncts out of ν P), the Spec ν P created by the movement counts as an A'-position. The same reasoning can apply to movement out of CP, which would remove one potential impediment to the SpecCP analysis of intermediate steps of NP raising.²⁴

Returning 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 SpecCP analysis of intermediate steps of NP raising, the reader is referred to Ormazabal (1995), Epstein and Seely (2006), and Tanaka (2002) for arguments for the claim. (Pesetsky 1992 is a predecessor of these works.) For additional evidence that A-movement out of CPs (in fact, both finite and non-finite CPs) is in principle possible, see Fernández-Salgueiro (2005, 2006), Ferreira (2004), Fujii (2005), McCloskey (2000), Nemoto (1991, 1993), Richards (1999), Rodrigues (2002, 2004), and Ura (1994), among others. I will only note here 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 (2000) shows (31)a provides evidence for overt object shift. Assuming that the

²⁴The status of the A/A' 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/A' distinction, but 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 (see Abe 1993 for an attempt to do that, as well as Bošković and Takahashi 1998 and Chomsky 1995b. See also Williams 2003 for a different way of eliminating the traditional A/A' distinction). The same holds for the Improper Movement mechanism, which used to be appealed to 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 be in principle 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.

infinitival subject *your mother* in (31)a 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 (31)b, where the infinitival subject is Case-marked by *for* within the infinitive. Now, McCloskey argues that in the case of long-distance extraction examples like (31)a and (32) below, the quantifier *all* is stranded in an intermediate SpecCP.²⁵

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

The ECM infinitive in (31)a 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 Fernández-Salgueiro (2005, 2006), Ferreira (2004), Fujii (2005), McCloskey (2000), Nemoto (1991), Richards (1999), Rodrigues (2002, 2004), Tanaka (2002), and Ura (1994), among others. I only give in (34) one Japanese example from Nemoto 1991, which involves A-movement across the CP headed by

²⁵Given that the ECM subject is located in SpecAgroP/SpecvP and *to* heads the infinitive, another option would be to locate *all* somewhere in the vP/VP projection in (31)a. However, McCloskey shows convincingly that the quantifier cannot be located in such a position, i.e. he shows that *all* is stranded in SpecCP in both (31)a and (32).

²⁶Note also that under the SpecCP analysis of successive cyclic A-movement, the embedded CP in (31)a 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 of multiple Specs of CP 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 who find it 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 specifiers 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, the possibility of a wh-phrase passing through a filled interrogative SpecCP 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?

to.)

(33) N' fhéadfadh a cuid feola [_{CP} gan t a bheith righin]
NEG could its portion flesh C 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 C 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 A'-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 in the same way with respect to its 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 A'- and A-movement may even be stronger, with intermediate traces located in SpecCP in both cases, a point which I believe is of some theoretical and empirical importance.²⁷ This then means that we should have a uniform account of successive cyclic A'- and successive cyclic A-movement, i.e. the same analysis should hold for both of them. The modified phase analysis proposed in the next section can indeed be applied to both successive cyclic A'- and successive cyclic A-movement in exactly the same way.

The central point of section 3 is that there is no feature checking in intermediate positions of successive cyclic movement, which again holds for both A'- and A-movement. This means that we cannot accept Chomsky's (2000, 2001) theory of successive cyclic movement, which relies on

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

intermediate feature checking. The alternative available in the literature is Takahashi's (1994) approach, which does not need 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 which seems to me to combine the best of both worlds: like Takahashi's approach, it will not rely on intermediate feature checking, but like Chomsky's approach, it will not rely on Form Chain.²⁸ As a result, we will not need 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 theory to be proposed will resemble Chomsky's approach, departing from Takahashi. However, the kind of look-ahead that Chomsky relies on to account for constructions like (4) (see the above discussion) will not be needed in the theory to be proposed. The theory will also be shown to have important consequences for Agree.²⁹

4 The Activation Condition and successive cyclic movement: Deducing the effects of the Activation Condition

At first sight, it may appear that although what we are trying to accomplish may be conceptually and empirically desirable it is simply impossible to do 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 would count as a separate operation which would violate Last Resort: given that there is no feature checking in intermediate positions and that no look-ahead is allowed, intermediate steps simply would not do anything.

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

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

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

According to Chomsky (2000, 2001), the role of the AC is to implement movement, i.e. the AC is needed to make movement possible. It is not clear what Chomsky has in mind by "implementation" here. Consider the following scenarios: (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 with the AC, and the one in (35) does not. It appears that in (35) we have everything we need to have X and Y undergo feature checking and move Y to SpecXP. The AC in fact seems to bring in an additional assumption, departing from conceptual necessity. In other words, it is not clear why we would need the AC 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 which, as we will see below, resolves the conceptual

³⁰For 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 non-nominative subjects which can be easily restated in a manner that is consistent with the AC (moreover, one of his central cases, Russian accusative subjects, do not seem to be located in SpecIP at all, see footnote 71 and Williams in press). 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 A'-movement).

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 of XP (37). In the scenario under consideration, Y needs to undergo successive cyclic movement to WP, via SpecXP. In accordance with the AC, Y has an uninterpretable feature K, which makes it visible for movement. (38) represents the same scenario, but before W enters the structure. (I assume that K is either checked as a reflex of F-feature checking between W and Y or that W has a K feature that can check the K feature of Y. For ease of exposition, I represent the latter option.)³²

³¹There are several recent works which show that, as it is, Chomsky's (2000, 2001) phase system, where only CP and ν P are phases, is empirically inadequate due 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 for Chomsky. Bošković (2002a), Boeckx (2003a) and Müller (2004) (cf. also Manzini 1994 and Takahashi 1994) argue that successive cyclic movement in fact targets every maximal projection on its way (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, would be targets of successive cyclic movement (in this respect, see Epstein and Seely 1999, 2006, Bošković 2002a, and Boeckx and Grohmann 2004 for problems for Chomsky's way of making CP and ν P special). The analysis to be proposed below does not depend on whether we will adopt Chomsky's view of successive cyclic movement, where such movement targets only CP and ν P, or the Bošković/Boeckx/Müller/Takahashi/Manzini view, where successive cyclic movement would target each maximal projection on its way. 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) (i.e. with only CPs and ν Ps being phases), or the phase update of Bošković/Boeckx/Müller/Takahashi/Manzini (with every phrase being a phase), the choice between the two being immaterial for our current purposes.

³²The 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 so that uninterpretable features are unvalued. Although appealing in some respects the proposal also has a number of problems. One obvious question is why valuation and interpretability should be tied lexically (cf. also Pesetsky and Torrego in press). Another problem is that because Chomsky's proposal disallows the possibility of two uninterpretable features 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 due 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 below will be neutral with respect to the two possibilities noted above (checking vs. 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 Bošković's 2006b empirical evidence for the superiority of the checking approach.)

(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 of the phase, if Y is to eventually move outside of XP it first has to get to its Spec. In Chomsky's analysis this is implemented by giving X the EPP property, which drives movement of Y to SpecXP, with the proviso that X can be given the EPP property only if this is needed to make successive cyclic movement possible, i.e. if Y does not remain in SpecXP (in other words, at point (38) we need to know that W will enter the structure later, as in (37)). As discussed above, such look-ahead 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 SpecXP in (38), but we do not want any look-ahead 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 outside 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 SpecXP, its uK feature will never get checked. So, uK of Y is what tells us that Y will have to move, and we know that without look-ahead (i.e., we know this at point (38)). All of this would be repeated on any higher phase level. At this point in 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 SpecXP in (38) then conforms with 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 in Chomsky's (2000, 2001) system treated as a formal requirement on the target to have an (additional) Specifier, is fully deducible, hence the generalized EPP mechanism can be eliminated (pending section 6, I will continue the discussion assuming 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 the AC must hold only for the cases where Y needs to move outside 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, there is no need to have the AC as an independent principle. Y in (37) will either have uK or not. If it does not, Y will never move

³³I will return to the issue below from a somewhat different perspective, where the uK feature on Y essentially indicates that Y needs to move. Notice also that a similar proposal to the one made in the text is made independently in 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.

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

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

outside of XP (since it won't move to SpecXP), as a result of which the uF of W will remain unchecked and its EPP property will not be satisfied. If Y has uK, it will move to SpecXP, as discussed above. It will eventually move to SpecWP, satisfying the EPP property of W and checking the F-feature of W, with the uK 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 SpecXP in (37) is thus greedy, in the sense that Y moves to SpecXP 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 really nothing to do with the movement of Y to its Spec. Recall that under Chomsky's approach, movement of Y to SpecXP 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 movement of Y to SpecXP, the intermediate head X is an innocent by-stander, it has nothing to do with it. Recall that, as discussed in section 3, this is exactly what we want. We have thus accomplished our goal of implementing successive cyclic movement without feature checking with intermediate heads. Crucial to the analysis was 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 (see also the discussion below), which resolves the conceptual problem with the AC noted in the beginning 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. Note that I will continue to use the term AC for ease of exposition.) 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

³⁶Regarding Superiority, it 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 in Park (2005) and Chomsky (in press), both of whom abandon the Attract Closest account of Superiority. The authors in question note that in the early successive cyclic movement approach, there are constructions in which wh-phrases can be re-ordered in a lower

There is one interesting consequence of the approach to the AC argued for here. As discussed above, the role of the AC is to implement successive cyclic movement. 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, putting it aside for the moment.

5 There are still some problems

5.1 Staying in a cyclic Spec

In the previous section, I have argued for an analysis on which there is no feature checking with intermediate heads on the path of successive cyclic movement. Under the proposed analysis, 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. We have also seen that there is no need to have the Activation Condition 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 have set out to do: the current approach to successive cyclic movement combines the MCLP and Chomsky's later approach to successive cyclic movement: as in the 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 approach, successive cyclic movement starts before

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 (this is what is needed 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 the Cheng and Demirdache (1990) analysis (under this analysis, Superiority would be a derivational constraint, but independent from any property of C). This suggestion is worked out in detail in Park (2005). Another possibility is to treat Superiority as a representational constraint (see, for example, Lasnik and Saito 1992), or have it follow from semantic considerations, as in Hornstein (1995).

the final target of movement enters the structure and the Form Chain operation is eliminated. Although the Activation Condition has played the crucial role in the analysis it turned out to be eliminable as a condition of the grammar, holding empirically for Move as a theorem.

It seems, then, that we have accomplished the main goal of the paper. However, there is a loophole in the analysis developed so far that needs to be closed. The current system 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) $[_{XP} X [_{KP} [_{ZP} \dots Y$
 F uF

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

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

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

In (40)a, Y would move to SpecXP, passing through Specs of KP and ZP (see (41)a). On the other hand, in (40)b Y would not move to SpecXP, since X does not have the EPP feature. However, in the system developed so far, we would expect Y to move to SpecKP in (40)b, where it would be accessible for feature checking (i.e. undergoing Agree) with X given the PIC (see (41)b). The uF of Y would drive movement to SpecKP 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 SpecKP. (Below, I will refer to SpecKP 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 off are given in ~~strikeout~~.)

(41) a. [_{XP} Y X [_{KP} ~~Y~~ [_{ZP} ~~Y~~...~~Y~~

~~uF~~ F

~~EPP~~

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

F ~~uF~~

In (41)b, 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 examples instantiating the abstract structure in (41)b all over the place. As an illustration, under Chomsky's assumption that *v*P_s and CP_s 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 SpecCP or unselective binding of the wh-phrase (the latter presumably would not be subject to the PIC). *What* in (42) is located in Spec*v*P, a cyclic Spec position.³⁷

(42) +wh C you [_{*v*P} 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

³⁷I am using here Chomsky's approach to phases rather than the every-phrase-is-a-phase approach (see footnote 31). Under the latter approach it would be difficult to run 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).

convincing case that would instantiate the abstract structure in (41)b.³⁸ If there are no cases of this kind that would be 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, Bošković (in press a), Lee (2003), and Stjepanović and Takahashi (2001) offer a number of empirical arguments that it isn't (see also Chomsky in press, who 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 briefly summarize some of the relevant arguments below. I will discuss consequences of Agree not being subject to the PIC for the current system 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 for example the case with languages that allow agreement to reach into a finite CP. One such language is Chukchee, as shown by the following example noted in Inènlìkèj and Nedjalkov (1973), also discussed in Mel'čuk (1988), Ura (1994), and Stjepanović and Takahashi (2001). (The last work

³⁸See also Bobaljik and Wurmbrand (2005) for arguments against treating A-dependencies along the lines of (41)b. It is, however, 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 (41)b, rather than an actual feature-checking/EPP position, which in (41)b would involve feature/EPP checking between X and Y (in other words, it is harder to show that SpecKP and K are true cyclic Specs/heads).

³⁹To 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.

⁴⁰The discussion below is rather condensed. The reader is referred to Bošković (in press a) and references therein for a more detailed discussion of Agree in the languages discussed in this section.

discusses the data in the same context as I do here. Irrelevant details are omitted from the glosses.)⁴¹

(43) ənan qəlyiɫu 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.’

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 regarding the example in question. 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. Below I give examples from Blackfoot, originally noted in Frantz (1978) and discussed recently in Legate (2005). (Notice that we are dealing here with finite clauses. Some irrelevant details are omitted from the glosses.)⁴³

⁴¹The English translation, which corresponds to Inèlikèj and Nedjalkov’s (1973) Russian translation, is provided by Mel’čuk (1988) (see, however, Bobaljik (in press), who raises an issue regarding the translations).

⁴²I refer the reader to Bošković (in press a) for an account of how this type of long-distance agreement is blocked in languages that disallow it. (The account is independent of the PIC. Appealing to the PIC would incorrectly block this type of agreement for all languages.)

It is worth noting here that in Bošković (in press a) 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 be inducing a blocking effect. (Note that in Bošković in press a I show that several illegitimate Agree relations that do not conform with the PIC are ruled out independently of the PIC because they violate Agree Closest. In this respect, it is worth noting that 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.)

⁴³Polinsky (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, very serious problems with this analysis. The reader is referred to Branigan and MacKenzie (2002), Frantz (1978), and Legate (2005) for relevant discussion.

(44) a. **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-1-pl

‘I want my son and myself to work.’

The agreement affix on the verb and the element it agrees with are given in bold in (44)-(45). Like (43), the Agree relations in (44)-(45) clearly violate the PIC (see also footnote 48, where it is argued 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) also seem to provide evidence that, as argued in section 4, Agree is not subject to the AC, i.e. 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 additional examples of this type).⁴⁵

⁴⁴Notice also that (45) involves first conjunct agreement, i.e. 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 SpecAgroP. 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).

⁴⁵Long-distance agreement is also allowed in Tsez, as shown by Polinsky and Potsdam’s (2001) (P&P) (i).

(i) eni-r [už-ā **magalu** bāc’ru-ŋi] **b**-iyxo.
 mother-dat boy-erg bread.**III**.abs ate **III**-know
 ‘The mother knows the boy ate the bread.’

P&P argue the NP agreeing with the higher verb in examples like (i) (the agreeing NP must be absolutive) undergoes LF topicalization to the edge of the embedded clause, which means that the relevant Agree relation does not violate the PIC if it applies following the LF movement. (Notice that on P&P’s account, Tsez has both topics with, and topics without, a topic marker, which I will refer to below as topic-marked and non-topic marked topics respectively.) However, in Bošković (in press a) I show that there are several problems with P&P’s analysis (see also Chandra in press). To mention just one of them, on p. 639 P&P 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, which in Bošković (in press a) I interpret 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

5.2.2 Agreement in existential constructions

Existential constructions in English provide additional evidence that Agree is PIC-free. Legate (2003) provides several empirical arguments that passive and ergative VPs should be considered phases, on a par with active and non-ergative VPs. As pointed out by McGinnis (2004), Nevins (2004) and Legate (2005), 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 (given in bold) separate the probe and the goal. (Notice also the agreement in the tag-question part, noted 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, on 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, for example, Chomsky 1993,

higher than the agreeing NP). Under P&P's analysis, on which both topic-marked elements and what they consider non-topic-marked topics (cf. *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 in press a for a comprehensive analysis of the Tsez data discussed by P&P, on which Tsez provides additional evidence that Agree is not subject to the PIC. It is also worth noting that P&P'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 (cf. (43)) and Blackfoot (see footnote 44).

⁴⁶The relevance of the anaphor movement hypothesis to our current concerns was noted by Duk-Ho An (personal communication).

1995b, in press, Lasnik 1999, and Reuland 2001). In the Agree-based framework adopted in this paper (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 are given in bold), thus 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*-phrase in Chinese (49) and Japanese (50), undergo Agree with the interrogative C, *wh-in-situ* constructions in languages like Chinese and Japanese provide abundant illustration of 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) Yuehan renwei Bide mai le sheme

John think Peter buy ASP what

(50) John-ga Peter-ga nani-o kat-ta to omot-teiru no?

John-Nom Peter-Nom what-Acc buy-Past Comp thinks Q

‘What does John think that Peter bought?’

⁴⁷In this respect, it is worth noting 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 in press a. However, Pesetsky suggests a different analysis for Chinese.)

5.2.5 The Phase-Impenetrability Condition and linearization

Above, we have seen a number of empirical arguments that the PIC does not hold for Agree.⁴⁸ Not having Agree be subject to the PIC may even be theoretically desirable. A number of authors (see Stjepanović and Takahashi 2001, Fox and Pesetsky 2005, Bošković in press a) have argued that the PIC effect for successive cyclic movement essentially follows from PF considerations. More precisely, the authors in question argue that if an element that is to move outside 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 (2001) proposes that once a phase-level is reached, everything but the edge of the phase, which means 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, this will lead to a PF problem with respect to linearization. (The gist of the analysis pursued by Fox and Pesetsky 2005

⁴⁸In Bošković (in press a) I give two additional arguments to this effect. One argument (cf. also Stjepanović and Takahashi 2001) is based on Landau's (2000) analysis of control, on 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, in contrast to 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 *there* existential construction is possible, although the conjunct cannot undergo movement. In Bošković (in press a) 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.

and Bošković in press a is that linearizing Y in the original spell-out unit and a later spell-unit would lead to conflicting ordering requirements.) This way, PIC effects are deduced: Y has to move to SpecXP, 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 All the authors in question 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 of the phase in the syntax (i.e. the PIC). Stjepanović and Takahashi (2001), Fox and Pesetsky (2005), and Bošković (in press a) 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 for the locality of syntax (which means that in the syntax itself phases are accessible from the outside); the only thing that they determine is what is shipped to Spell-Out (i.e. units of multiple Spell-Out). Details of the analysis are not important for our purposes (in fact, the works in question offer different implementations of this general idea)—what is important for us from this line of research is that given that we can obtain successive cyclic movement via PF, namely 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 of 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/PIC are irrelevant to pure Agree.⁵⁰ The reduction of the direct effect of phases to the

⁴⁹All of this will be implemented via the AC in the next section (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.

⁵⁰Note 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 (cf. Chomsky 1995b): the phonology was simply assumed to strip off the phonological features (i.e. the features it needs), all other features

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 we have seen above that there is also considerable empirical evidence that Agree is insensitive to phases/PIC.

To summarize, the central point of the discussion in section 5 is that the analysis developed in section 4 allows for the possibility of Y staying in the Spec of a cyclic head where it undergoes Agree with a higher probe, which seems undesirable, and that, in contrast to Move, Agree is not subject to the PIC. While the latter state of affairs may be capturable by reducing the effect of the PIC to the syntax-phonology interface along the lines sketched above, what is important for our purposes and what the reader should bear in mind 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 not being subject to the PIC, showing that it brings us back to Chomsky's (2000, 2001) look-ahead problem discussed in section 3.

6 Eliminating generalized EPP

6.1 The look-ahead problem revisited

Let us consider the issue with respect to (37)-(38), repeated as (51)-(52), with XP being a phase.

remaining in the syntax, where they are 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 in fact 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 p. 132 (condition (53)) and pp. 136-137 for various approaches to the cycle.) Thus, I assume the following: (a) The cycle is defined with respect to the target of movement/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).

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

(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 SpecXP, XP a phase, so that the uK feature of Y can be eventually checked, the underlying assumption being that if Y does not move, its uK feature will never get checked causing the derivation to crash, with the crash determined locally (i.e. at point (52)). Recall, however, that phases/PIC are irrelevant to Agree. This means that 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 uK in (52), which means that uK cannot drive movement of Y (i.e. the need to check uK cannot drive movement since we don't have a certain crash 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 SpecXP. However, we do not know this at the point that structure building has reached in (52), we will know this only once W enters the structure, as in (51). In other words, we need look-ahead: at the point when (52) has been built we need to know that W will eventually enter the structure. As noted above, such look-ahead is also needed in Chomsky's (2000, 2001) system. So, the insensitivity of Agree to the PIC has brought us back to Chomsky's look-ahead problem. Since one of the central goals of this paper is to resolve the look-ahead problem, we cannot simply (and regrettably) accept it as a fact of life. Let us, then, see how the look-ahead problem can be resolved. The problem with (51) is that the diacritic indicating that Y will have to move to SpecWP 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 be moving to the Spec of *that* in (53) we need 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 have faced above 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 SpecWP before W enters the structure. To put it more succinctly, the gist of the look-ahead 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)—the diacritic 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 a particularly appealing way of resolving the issue at hand, so we should try to do better than this. In fact, let us try to eliminate the EPP diacritic altogether. During the discussion below the reader should also bear in mind what our goal is with respect to (51)-(52): Given that, in contrast to Agree, Move is subject to the PIC, we need to be able to identify Y as an element that needs to undergo overt movement outside of XP at point (52).

It is standardly assumed that a probe must c-command the goal (i.e. the former 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, and 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 like a probe must have an uninterpretable feature, an uninterpretable feature (i.e. an element with an uninterpretable feature) must function as a probe. In other words, checking of an uninterpretable feature K on X requires X to function as a probe—more precisely, uK of X can be checked and deleted *if only if* X c-commands the checker. This means Y in (51) will need to undergo overt movement outside of XP in order to license its uK feature. In fact, pure Agree will not suffice for that even if Y is located in SpecXP, with no other phases intervening between Y and W. We have thus prohibited 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 (cf. (41)b). Most importantly, regarding (51)-(52), we now know that Y will need to undergo overt movement outside of XP before W enters the structure: already at point (52) we know that the structure will crash unless Y moves outside of XP (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, this means that Y will have to move overtly outside of XP, hence has to move to SpecXP. (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, which means SpecWP.⁵²

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

⁵²See Richards (2001) for relevant discussion of the Shortest Move requirement. 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 Spec-head or a head-head configuration (for relevant discussion, see Bošković 2001).

this paper.

Recall that we have seen above that the AC does not hold for Agree. The above discussion leads us 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 SpecWP 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: in early Minimalism this was done through strong features, and in the current theory through the EPP

⁵³An 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).

⁵⁴See Epstein and Seely (1999, 2006) for discussion of the traditional EPP in this context, which is generalized here, with 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 in this paper is also quite different from Epstein and Seely's analysis, which should become obvious during the discussion of the Inverse Case Filter below. The reader is also referred to Fernández-Salgueiro 2006, who quite conclusively shows that the BELIEVE construction which 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 2005 and Epstein and Seely 2006.)

diacritic, which indicates that certain heads need Specifiers. In the approach adopted in this paper, 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 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, as discussed above, has helped us analyze without look-ahead constructions where we need to know whether overt movement will take place before its target enters the structure.

Let me also point out that eliminating the EPP is clearly a conceptually desirable move (see also Epstein and Seely 2006 for much relevant discussion). It is not just that the move achieves a simplification of the grammar through elimination of a mechanism, which is always desirable. It's that the mechanism in question does not really make much sense from the current theoretical point of view. In Chomsky (1995b), 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 really 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. It's love and 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 piggy-backs on feature checking, in the sense that an element that moves to satisfy the EPP must be of a particular feature make-up (i.e. it's not the case that 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 theoretical approach. As a result, eliminating it is clearly a conceptually desirable move.

⁵⁵This is quite generally in line with the move in the current system to moving-element-driven movement, as opposed to target-driven movement.

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

6.2.1 Movement to SpecIP

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.

(57) *Arrived John.

(58) cf. John_i arrived t_i.

Like all nouns, *John* has an uninterpretable Case feature uK (which is a minimalist instantiation of the traditional requirement that nouns have Case, referred to below as the Case Filter for ease of exposition⁵⁶). To check the feature, *John* has to move to SpecIP, 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 are there 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

Several recent works (see Boeckx 2000a, Bošković 2002a, Epstein and Seely 1999, 2006, Grohmann, Drury, and Castillo 2000, and Martin 1999) which 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 assigner *must* check/assign their Case in a Spec-Head

⁵⁶How 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.

⁵⁷Note also that, as discussed in Epstein and Seely (1999), there is a mutual c-command relation between an element in SpecIP (K) and I: K merges with the object that is labelled by I, hence is I, given that the label is the head (see Chomsky 1995a). K in SpecIP 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 Spec-head configuration can probe each other, i.e. 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 the following: $X(uK)\dots Y(uK)$, where X and Y need to probe each other and X is higher than Y before Y moves to SpecXP: X will probe Y either before Y moves to SpecXP (if uninterpretable features do not disappear before they are sent to Spell-Out) or X will probe Y after Y moves to SpecXP (i.e. at that point X and Y will probe each other).

configuration. Under the current analysis, there is no need to appeal to either the EPP or the Inverse Case Filter to account for (57), i.e. 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 the 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 of A-movement. Without it, A-movement could not exist. We thus may 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*

⁵⁸Traditional 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 (ii) 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. (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.
he will buy car.acc
- b. On će kupiti pet kola.
he will buy five cars(gen) (Serbo-Croatian)
- (iv) a. Janek czytał książkę.
Janek read books(acc.)
- b. Janek nie czytał książki.
Janek neg read books(gen.)
'Janek did not read books.' (Polish)

The current analysis leads to the adoption of the overt object shift analysis of English, which means that English (in fact any language) has overt movement of accusative elements to SpecAgroP/SpecvP, motivated by licensing of the accusative Case of the object, an uninterpretable feature. There are many arguments in the literature to this effect (see Authier 1991, Boeckx and Hornstein 2005, Bošković 1997a,b, 2002a, 2004a, Epstein and Seely 1999, 2006, Johnson 1991, Koizumi 1995, Lasnik 1999, McCloskey 2000, Runner 1998, Ura 1993, among others). 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 briefly summarize below a few arguments for it. (The reader is referred to the references given below for more detailed discussion. For the sake of brevity, I stick to 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 (59)a 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 (59)b, 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

⁵⁹In this respect, see Bošković (2002a), who observes 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 due to the lack of a θ -relation between the verb and the ECMed NP. (Bošković 2002a discusses English. For relevant discussion of Kinande, see Bošković in press b.)

explanation why the verb, which normally moves above the shifted object, does not have to 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). Based on (61)a, 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 (61)b, 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 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).

Bošković (1997a,b) provides another argument based on (62). Without overt object shift and the accompanying V-movement (the overt object shift analysis assumes short V-movement, which is not the case with the no overt object shift analysis), the construction can only be analyzed as involving infinitival coordination ((62)a). 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 ATB dependencies although the Coordinate Structure Constrains is operative in covert syntax.) Under the overt object shift analysis, the construction can be analyzed as involving matrix AgroP coordination ((62)b), so that both infinitival subjects can be Case-licensed without a violation.

(62) a. John [_{AgroP} [_{VP} believes [_{IP} Jim to be crazy] and [_{IP} Mary to be smart]]]

b. John_i believes_j[[_{AgroP} Jim_k t_j[_{VP} t_i t_j[_{IP} t_k to be crazy]]] and [_{AgroP} 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, which can be readily accounted for if *whom* must move into the matrix clause via object shift prior to wh-movement (see Bošković 1997b:118-121 and Bošković 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 Q-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 the adoption of the overt object shift analysis, which has considerable independent support.⁶⁰

⁶⁰Note that the above arguments apply equally to definite and indefinite NPs, indicating that English object shift differs from what Bobaljik (1995) and Diesing (1996) considered 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 SpecAgroP (see Holmberg and Platzack 1995, Bošković 1997b, 2004a,b, and Chomsky 2001, among others). 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

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 (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 [_{wh-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). A 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 establishment of 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 uCase 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 SpecvP. However, this derivation is ruled out because *who* is located outside of 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 SpecCP, as indicated, for example, by the following sentence from Innu-aimûn (an obligatory overt

NPs to a position above SpecAgroP in Icelandic (not to SpecAgroP).

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 base-line data hold). Note that I include (67) just in case expletive *it* constructions involve an expletive-associate relation which wh-movement somehow interferes with in (66) (cf. also Vukić's 2003 last resort expletive insertion hypothesis).

wh-movement language), in which, as shown by Branigan and MacKenzie (2002), the matrix verb shows object agreement with the wh-phrase in SpecCP. (See also Polinsky and Potsdam 2001:638 regarding Tsez. For discussion of such examples within the system developed here, see Bošković in press a.)

(69) Tshi-tshissenim-âu-â auen ka-pâpâtaka?

2-know-3-Q who is laughing

‘Do you know who is laughing?’

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 the example provides additional evidence that Agree is not subject to the AC.

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 licensor.

6.2.4 *Wager-class verbs: Case-marking during wh-movement*

The current system, where an NP probes its Case licensor, may also enable us to shed some light on the long-standing problem presented by the puzzling behavior of verbs like *wager*, which, as noted in Postal (1974), can ECM 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 (70)a involves a locality violation. Assuming the overt object shift

analysis, I argued that due to the presence of an additional VP shell with a filled Spec that occurs with this class of verbs, *Mary* cannot reach matrix SpecvP without a locality violation. (I basically argued that (70)a involves A-movement across a (non-equidistant) A-Spec.) As for (70)b, 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 turned out to be rather difficult to implement (see, for example, Bošković 1997b and Ura 1993 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 (70)b becomes rather 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 A feature-checking movement to the matrix SpecvP in (70)b (i.e. object shift), Bošković's (1997b) locality problem that arose in (70)a does not arise in (70)b.⁶²

6.2.5 Quirky subject constructions

Let us now consider constructions where the traditional EPP has often been assumed to be involved as 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 argued by a number of authors (see, for example, Bejar and Massam 1999, Belletti 1988, Bošković 2002a, Chomsky 2000:127, in press, Cowper 1988, Frampton and Gutmann 1999, Freidin and Sprouse 1991, and Williams in press), quirky subjects have a structural Case, which is not morphologically realized, on top of the inherent Case.⁶³ Their movement to SpecIP can then be driven by the need to check this Case. In this respect, it is worth noting that, as observed in, for

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

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

example, Boeckx (2003b), quirky subjects in Icelandic are subject to the customary freezing effect Case checking has on A-movement. Like structurally Case-marked NPs, once they move to a Case-checking SpecIP, quirky subjects cannot undergo further A-movement, which can be easily accounted for under the Case-driven movement, but not under the pure EPP-driven movement analysis of quirky subjects. Quirky subjects are not only banned from A-moving from a Cased SpecIP, they are also prohibited from moving into a Caseless SpecIP (as the final landing site), as noted in Freidin and Sprouse (1991), which also argues against the pure EPP-driven movement analysis of quirky subjects.⁶⁴

⁶⁴It is worth noting here an interesting Slavic paradigm which can be interpreted as an argument for the double Case-marking analysis adopted above. As shown in (ia), taken slightly modified from Franks (1995), 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 druž'jami.
 factory(nom)/(instr) manages-refl. our(instr) friends(instr)
 'The factory is managed by our friends.' (Russian)
- b. Fabrikom/*fabrika se upravlja od strane naših drugova.
 factory(instr)/(nom) refl. manages by our(gen) friends(gen)
 'The factory is managed by our friends.' (SC)
- (ii) a. Naši druž'ja upravljajut fabrikoj.
 our(nom) friends(nom) manage factory(instr) (Russian)
- b. Naši drugovi upravljaju fabrikom.
 our(nom) friends(nom) manage factory(instr) (SC)

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, with the Case being realized on both the demonstrative and the noun in (iii). (Genitive is the only possibility here. See Bošković 2006a for details of 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.
 five these(gen) girls(gen) work here (SC)
- b. Pjat' ètix devušek rabotali tam.
 five these(gen) girls(gen) worked there (Russian)

As discussed in Franks (1995), the demonstrative can move in front of the numeral in both SC and Russian, in which case it must preserve the original pre-movement Case (i.e. genitive), in SC, while in Russian it becomes accessible for Case assignment by a higher head, as indicated by the fact that it bears nominative in (ivb).

- (iv) a. Ovih/*ove pet djevojaka rade tu.
 these(gen)/(nom) five girls(gen) work here (SC)
- b. Èti/*ètix pjat' devušek rabotali tam.
 these(nom)/(gen) five girls(gen) worked there (Russian)

6.2.6 Existential constructions

Let us now consider 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].

I will adopt here the Belletti/Lasnik analysis of existential constructions, on 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 SpecIP to license its structural nominative Case. Consider now (71). The derivation on which the partitive Case option is not taken can be easily 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 Bošković (2006a), I provide a uniform account of the paradigms in (i) and (iv). More precisely, I suggest that in both cases we are dealing with a situation where two cases are assigned to one phrase, instrumental in (i) and genitive in (iv) before movement, and nominative in both cases 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.

⁶⁵Note 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), Bošković (1997b, 2002a, in press a), Epstein and Seely (1999, 2006), Lasnik (1992, 1995, 1999), and Martin (1992). As discussed in the works in question (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 in press a. For discussion regarding which elements can license partitive Case, see especially Lasnik 1992, 1995. Roughly, partitive Case is available only in the contexts with the verb *be* or an unaccusative verb (cf. *there arrived someone*). As noted 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 SpecIP would probe I (see here footnote 57).

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 due to its 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 example (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 have set out to do: the partitive Case option can be 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, we do not need either the EPP or the Inverse Case Filter to account

⁶⁶Since under the current analysis, which in the relevant respect actually follows Chomsky (1995b) (see the discussion below), 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. The claim has already been made on independent grounds by several authors who otherwise adopt the DP hypothesis (see, for example, Bowers 1987 and Stowell 1989). 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.

⁶⁷If there always has to be some kind of a 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), in contrast to Chomsky (1993, 1995b), where there is a direct syntactic relation between the two. 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 account for its rarity. In Bošković (2005a) I in fact give several other cases of scattered DPs where both parts of the scattered DP must be Case-marked, which suggest that we may indeed be dealing here with a larger generalization. (The reader is also referred to Hornstein and Witkoś 2003 and Sabel 2000 for another version of Chomsky's complex DP analysis of the *there*-associate relation.)

for the presence of *there* in (73)), in accordance with the current attempt to eliminate the mechanisms in question.⁶⁸

6.2.7 *Postverbal nominatives*

Let us finally briefly consider the question of how languages that allow nominative subjects to follow the verb which has not moved to C should be treated in the current system. Such subjects appear not to have moved to SpecIP overtly; still they receive nominative. This seems to be unexpected under the current analysis. There are several ways of accommodating the case under consideration, which are given below:

(a) Nominative Case in question is not an uninterpretable feature, which means that it does not require movement to SpecIP (see Bošković 2005a, Sigurðsson 2002, Uriagereka 2002, Butt and King 2004, Svenonius 2002, and Stjepanović 2005, 2006 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 1936/1984));

(b) Nominative Case in question is actually a default Case, hence not assigned by I. (In this respect, notice that 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*, which does not consider it to be a regular structural Case.

(c) 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).

⁶⁸In 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 being based on the proposal that clauses may have Case (see Bošković 1995, Picallo 2002, and Epstein and Seely 2006) and the proposal that there is an expletive-associate relation between the expletive *it* and the clause. (See Bošković 1997b and Tanaka 1995, who argue against McCloskey 1991 in this respect. For relevant discussion, see also Epstein and Seely 2006.)

(d) We are dealing here with overt movement to SpecIP 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 (for example Serbo-Croatian, see Stjepanović 1999, 2003; Russian, see Bailyn 1995; and Italian, see Belletti and Shlonsky 1995, Calabrese 1992 and Zubizarreta 1998). Assuming with 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 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 SpecIP overtly.

(e) Postverbal nominatives are located in a rightward SpecIP (see Zubizarreta 1999 regarding Spanish).⁶⁹

I leave further exploration of the options sketched above for future research, with an understanding that it is unlikely that one of the above options will account for all the nominatives in question (after all, in many respects they do not all behave in the same way). Rather, 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 (2003b) for Icelandic⁷⁰ and Tada (1993), Takahashi (1996), and Saito and Hoshi (2000) for Japanese. Under the current

⁶⁹If there is an LF component which 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 SpecIP in LF.

⁷⁰Among 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, on 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 (2006), can also easily handle multiple subject constructions within the current system.

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 off, the object would still be able to undergo Agree with T, since the Activation Condition does not hold for Agree even as a theorem in the current system, as discussed in section 4 (cf. also the data discussed in section 5, which provide further empirical support for this claim).⁷¹

6.3 *Wh-movement without 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 uCase 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 Bošković (2002b) I argue is related to focus. (For relevant discussion, see also Watanabe 2002, who argues 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 feature 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 A'-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

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

⁷²While in the previous section I argued that the current, EPP-less approach is superior to the standard EPP approach, 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.

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, see section 5.2.4.)⁷⁴ As for English, we can capture it if English wh-phrases optionally have the uninterpretable uF feature, with the further assumption that English +wh C does not allow more than one Specifier, assumptions that are necessary under Chomsky's analysis as well.⁷⁵ A consequence of the above assumptions regarding

⁷³A 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 (in fact, there are even dissenting voices regarding the standard claim that the head in question is C in English). In light of the current debates regarding this issue, I will 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).

⁷⁴A word is in order regarding the hotly debated issue of how to treat what was considered LF wh-movement in the Government and Binding framework within the Minimalist Program. 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 way beyond the scope of this paper to attempt to determine which of the above is the proper way to treat the traditional LF wh-movement. Here, I simply adopt one of the above options, namely, Agree, without discussion for the wh-phrases under consideration. (However, I believe that the current system can be adjusted to accommodate other approaches.)

⁷⁵In Chomsky's system, *who* would need to have the uK feature in *Who did she say that he gave the book to* (or it could not undergo wh-movement), but would not have it in *What did she say that he gave to who* (the feature could not be checked due to 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 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 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 SpecCPs (*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 positive evidence is required for the multiple absorption in SpecCP 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 SpecCPs are unusually free with respect to possibilities for absorption, which suggests the proper way of stating the crosslinguistic difference with respect to absorption is as follows: a language either doesn't allow additional wh-phrases in SpecCP to undergo absorption at all, or such wh-phrases are free to undergo absorption in any SpecCP. Thus, Dayal (1996) observes the second embedded wh-phrase in (i), which is located in the embedded interrogative SpecCP under the standard analysis of Bulgarian questions, can take either matrix or embedded scope, i.e. it can be absorbed either with the embedded or 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?'

English is that exactly one *wh*-phrase will *always* move to SpecCP 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, i.e. uF (recall that since English is not a *wh*-in-situ language, there is no option of *what* bearing iF). If *what* in (74)-(75) has the uF feature, it will have to move to SpecCP so that it can check off 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 SpecCP (for recent discussion, see Agbayani 2000, An 2004, Boeckx 2003a, and Pesetsky and Torrego 2001).

(76) Who left?

Under the current analysis *who* in (76) in fact must move to SpecCP. 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 SpecCP so that it can probe the C. On the other hand, if *who* does not have the uF feature, it will not move to SpecCP. However, since the uF feature of C remains unchecked, this derivation cannot yield a legitimate output. The current analysis thus leads us to the conclusion that *who* in (76)

For another perspective regarding the Bulgarian/English difference with respect to multiple *wh*-fronting, the reader is referred to Pesetsky (2000), where, like Bulgarian, English allows multiple SpecCPs in the syntax, but, in contrast to Bulgarian, it does not allow pronunciation of more than one SpecCP in PF.

must move to SpecCP, as argued by An (in press), Boeckx (2003a), and Pesetsky and Torrego (2001).⁷⁶

To summarize, a consequence of the assumptions regarding English adopted above, which are also necessary in Chomsky's system, is that exactly one wh-phrase will *always* move to SpecCP in English questions. Most importantly, there is no need to give the interrogative C in English an EPP property to force movement to SpecCP, which is in line with the current proposal that the mechanism in question be dispensed with. The pattern of crosslinguistic variation regarding the properties of wh-phrases with respect to the F feature is summarized below. (Recall that the F feature of the target is uninterpretable for all languages. Notice also that it is not out of question that in some languages wh-phrases optionally bear iF. Such languages would still be wh-in-situ languages.)⁷⁷

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

It is worth noting here that the current analysis may also explain the contrast between the Korean counterpart of *John left why* (*John-i way ttena-ss-ni*), which is acceptable with *why* in situ, and English **Who left why*. As discussed above, in Korean, the C undergoes Agree with *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 a 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 and 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 such languages the declarative C can check the uF feature of wh-phrases. Under some analysis, the “declarative” clause hosting partial wh-movement is actually treated like a question, i.e. a +wh CP (see Dayal 1996, Stepanov 2001, and 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.

⁷⁷There 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 due to the failure to type the relevant clause as interrogative. (On Cheng's analysis, in wh-in-situ languages wh-movement is not necessary to type a clause as interrogative). Notice that on the analysis presented in the text 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.

(77)	Bulgarian wh-phrases	Korean wh-phrases	English wh-phrases
	uninterpretable F	interpretable F	(uninterpretable F)

To summarize the discussion in section 6, I have argued that the Generalized EPP mechanism can be dispensed with, and the same holds for the Inverse Case Filter. Generalized EPP effects (and the same again holds for the Inverse Case Filter) follow from the AC, which itself follows from something else. Under the analysis adopted in this paper, generalized EPP effects follow from a property of the moving element, which is in line with the move 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 look-ahead constructions where we need to know whether overt movement will take place before its target enters the structure. The gist of the look ahead 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 in this paper, where movement is moving-element driven.

Notice also that, under the analysis adopted in this paper, 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 uninterpretable) will always lead to movement of Y to XP, i.e. it will result in Move. On the other hand, giving uK *only* to X (i.e. marking only K of X 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 theory of successive cyclic movement, which reconciles the early and the current minimalist approaches to successive cyclic movement. As in the early approaches, there is no feature checking in intermediate positions, i.e. in intermediate landing sites of successive cyclic movement. However, as in the current approaches and in contrast to early Minimalism, successive cyclic movement starts before the final target of movement enters the structure, and the Form Chain operation 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
- Generalized EPP (the I-need-a-Spec property of attracting heads)
- 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, with Move being moving element driven and Agree target driven. The system was also shown to resolve a look-ahead 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/PIC free conception of Agree, providing a number of empirical arguments to this effect. 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

It is worth noting at this point that several of the arguments given in Bošković (2002a) and Boeckx (2003a) 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, but also involve arguments for the operation Form Chain. Since the current analysis follows Chomsky in not assuming Form Chain the arguments in question raise a potential problem for the current analysis, just like they do for Chomsky. 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).)

(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]]?

Bošković (2002a) observes 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,

⁷⁸Boeckx (2003a) 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 2003a consider it unacceptable and Chomsky in press acceptable), I will not discuss it here. I refer the reader to Bošković (2005b:66-68) for relevant discussion.

the contrast between (79)b 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 (79)a and NP in (79)b) and finishing in the matrix SpecCP is then formed, formation of the chain being driven by feature checking with the matrix C, thus conforming with Last Resort. The MCLP forces the movement to proceed via the intermediate SpecCP, but no feature checking takes place in this position. In contrast to (79), (80) does not involve single chain formation. Rather, we are dealing here with two separate chains: one chain involves movement of the PP to the embedded SpecCP, and the other chain involves movement of the wh-phrase, an NP, from inside the PP to the matrix SpecCP. Given that there is no feature-checking with the embedded declarative C, formation of the first chain violates Last Resort. The contrast between (79)b and (80) is thus accounted for under the MCLP analysis.

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

⁷⁹Note that movement out of SpecCP generally yields a weak violation in English. In this respect, notice 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 SpecCP.

(7) 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 uK feature that is involved in the element undergoing wh-movement can be located either in the P, in which case the whole PP must undergo movement (as in (79)a), or in its complement NP, in which case the NP would have to move alone, stranding the P (as in (79)b), given the preference to carry as little material as possible under movement (see Bošković 2004a, Chomsky 1995b, and Stateva 2002). Turning to (80), to make it possible for the whole PP to undergo movement to the intermediate SpecCP, uK would have to be located in the P (if it were located in its complement, movement to the intermediate SpecCP would have to strand the preposition). But then, moving the NP complement alone after the PP moves to SpecCP is impossible. The relevant uK feature 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 conclude therefore 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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Abstract: The paper proposes a new theory of successive cyclic movement which reconciles the early and the current minimalist approach to successive cyclicity. As in the early approach, there is no feature checking in intermediate positions of successive cyclic movement. However, as in the current approach and in contrast to early minimalism, successive cyclic movement starts before the final target of movement enters the structure, and the Form Chain operation is eliminated. The paper also argues the locality of Move and Agree is radically different, Agree being free from several mechanisms that constrain Move, in particular, phases and the Activation Condition. However, it is shown there is no need to take phases to define locality domains of syntax or posit the Activation Condition as an independent principle. The two 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 shown to be dispensable. The traditional Case Filter, stated as a checking requirement, is argued to be the sole driving force of A-movement. More generally, a system is developed in which Move is always driven by a formal inadequacy (an uninterpretable feature) of the moving element, while Agree is target-driven. The system is shown to resolve a look-ahead 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) EPP, phase, Spell-Out, successive cyclic movement