

On the Locality of Move and Agree: Eliminating the Activation Condition, Generalized EPP, Inverse Case Filter, and Phase-Impenetrability Condition*

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0. Introduction

The goal of this paper is to investigate the locality 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 Spell-Out and successive cyclic movement. Focusing on the locality of Move and Agree, I will argue, contra Chomsky's (1999, 2000), 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, i.e. it will be deduced.

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. 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

*I thank Steven Franks, Norbert Hornstein, Jairo Nunes, Arthur Stepanov, and the participants of my Fall 2004 syntax seminar at the University of Connecticut for helpful comments and suggestions, and Simona Herdan and Miguel Rodríguez-Mondoñedo for editorial assistance.

¹See also Bošković (1998) and Bobaljik and Wurmbrand (in press).

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.

Extension Condition constraining the Form Chain operation, not particular chain links, whose creation is licensed by the Minimize Chain Links requirement.

By contrast, later approaches to successive cyclic movement (for example, Chomsky 1995, 1999, 2000, 2001) 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 that 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 Bošković 2002a and Boeckx 2003). 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 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 (1999, 2000) 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 1997a, 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).

Finally, I will argue following Fox and Pesetsky (in press) that *phase* as a syntactic locality domain and the Phase-Impenetrability Condition (PIC) should be eliminated, successive cyclic movement being forced by phonological considerations. However, the actual implementation of the idea will be rather different from Fox and Pesetsky's. An important consequence of the current analysis is that the operation of Agree is phase/PIC free, a claim for which I will also offer empirical evidence. The move is rather natural: 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 reader should bear this in mind.

The paper is organized as follows. In section 1 I discuss the two approaches to successive cyclic movement briefly summarized above: the MCLP approach and the feature checking approach. Section 2 provides evidence against feature checking in intermediate positions of successive cyclic movement. In section 3 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 4 argues for elimination of phases as syntactic locality

domains and the PIC, and section 5 argues for elimination of the generalized EPP and the Inverse Case Filter. In this section I will also argue that Agree is AC-free. In section 6 I will argue that phases/PIC do not constrain Agree either. Section 8 is the conclusion. Finally, the appendix discusses several remaining issues regarding successive cyclic wh-movement.

1. 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).³ 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.⁴

³Takahashi's approach is revived in Bošković (2002a), Boeckx (2003) (see also Ochi 1998 and Stepanov 2001).

⁴In fact, I argue 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.

(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 (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 4) 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 Takahashi's 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 (1995) 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 Tahahashi's 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 the 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.⁵ 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 (1999, 2000) assumes that Agree is a component of the operation Move driven by the EPP feature. 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 1995 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

⁵In what follows I ignore vP as a phase.

it to be a result of a property of C, but the movement itself, and does not consider each step of successive cyclic movement a separate operation). Since the phase analysis ties successive cyclic movement to a property of intermediate heads, it is difficult in this system to rule out (4) in a principled way given the derivation on which we have chosen the EPP option for *that*, which results in movement of *what* to the embedded SpecCP, just as it does in (1).⁶ 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.⁷

There is a suggestion in Chomsky (2000:109), more fully worked out in Chomsky (1999:29), 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 (see Chomsky 1999:29 for another possibility). 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

⁶Notice 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?*

⁷But see Saito (2000).

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 1995 analysis allow elimination of the mechanism, provides a conceptual argument in favor of the latter analyses.

Putting aside the look-ahead problem, recall that an important distinction between the Chomsky (1995)/Chomsky (2000) analyses and Takahashi's (1994) 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 (2003), who argue for a return to Takahashi's MCLP analysis, 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 a couple of arguments from Bošković (2002a).

2. No feature checking in intermediate SpecCPs and SpecIPs

One argument for the lack of feature checking in intermediate SpecCPs targeted by successive cyclic *wh*-movement from Bošković (2002a) concerns licensing of ellipsis.⁸

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, (7) 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.

⁸I will state the argument in terms of Chomsky's (1995) system, which relies on Spec-head agreement, but, as noted below, the argument also extends to Chomsky's (2000) system.

- (7) 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 that Peter met someone but I don't think [_{CP} [_{C'} that ~~*Peter met someone*~~]].

Significantly, as noted in Bošković (1997a), intermediate C cannot license ellipsis of its IP complement.⁹

- (8) *John met someone 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 (8) should then be taken as evidence against the feature-checking view of successive cyclic movement, on which C/*that* would undergo SHA in (8). Under this view, (8) is incorrectly expected to pattern with (7)d rather than (7)e.¹⁰ 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, (8) is incorrectly predicted to be acceptable since the declarative complementizer C/*that* takes a Spec.

Note also that the feature-checking approach to successive cyclic movement forces on us the rather perverse 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

⁹A similar example, but with more parallelism between the conjuncts, is given in (i).

(i) *I know who Mary said C/*that* John met, but I don't know who Peter said C/*that John met*.

¹⁰Appealing 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.

specified as [-wh] (see Lasnik and Saito 1992).¹¹ 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. Bošković (2002a) interprets this as another argument for the superiority of the MCLP approach over the feature-checking approach to successive cyclic movement.

Returning to ellipsis, Bošković (2002a) observes that the ellipsis argument discussed above also extends to non-control infinitival Is. As discussed in Martin (1996, 2001) (see also Bošković 1997a and Koizumi 1995), 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 (9) is checked for null Case by the infinitival I, *to*, hence must undergo SHA with *to*.

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

Significantly, Martin (1996, 2001) (see also Bošković 1997a and Koizumi 1995) observes that VP ellipsis is not possible in ECM infinitives, which have been argued by many authors to involve overt object shift (see the references in footnote 41), an assumption that I also adopt here.

(10) *John believed Mary to know French but Peter believed [_{AgroP} Jane_i [_{IP} t_i [_{I'} to *t_iknow French*]]].

Under the overt object shift analysis, *Jane* in (10) moves to the matrix SpecAgroP/SpecvP, passing through the infinitival SpecIP. In this respect, note the possibility of quantifier float in (11), which, as discussed in Bošković (1997a), 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.

(11) I believe the students all to know French.

Returning to (10), Epstein and Seely (1999:81) interpret the ungrammaticality of the construction

¹¹A similar problem also arises in Chomsky's (2000) system, given that for Chomsky Agree is a component of the EPP-driven operation Move.

as indicating that, in contrast to *to* in (9), *to* in (10) does not undergo SHA. This in turn provides evidence that *Jane* 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 (8), movement of *Jane* through the infinitival SpecIP in (10) is forced by the MCLP, not a feature-checking requirement (cf. footnote 4). As a result, no SHA with *to* takes place in (10) in spite of *Jane* passing through the embedded SpecIP.¹²

Additional 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 (12).

- (12) 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 (1995) gives an account of (12) 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 (12). 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 (12)a, blocks the indefinite movement to the embedded SpecIP, which takes place in (12)b. Bošković (2002a), Grohmann, Drury, and Castillo (2000), and Epstein and Seely (1999), however, observe several problems with the Merge-over-Move account.

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 (9) above, the control variants, whose infinitival complement's SpecIP is filled by PRO, allow VP ellipsis. The reader is referred to Martin (1996, 2001) 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*.

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.

(13) 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 (14).

(14) 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 (14)a moves overtly to satisfy the EPP.¹³ Under Chomsky's definition of phase, the constructions in (14) 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 (14)a. Given the Merge-over-Move preference, the possibility of expletive insertion should block indefinite movement. As a result, (14)b should block (14)a (i.e., (14)b should be grammatical and (14)a ungrammatical).

Consider now (15).

(15) Mary believes John_i to t_i know French.

At the point when the embedded clause is built in (15) there are two possibilities for satisfying the EPP: we can either move *John* or merge *Mary* into the infinitival SpecIP. Given the Merge-over-

¹³Under the partitive Case hypothesis and assuming overt object shift (see footnote 41), the indefinite may be located in its Case-checking position overtly.

Move preference, the latter should block the former. As a result, we cannot derive (15). Chomsky (1994) observes that the derivation on which *Mary* is introduced into the embedded SpecIP eventually violates the θ -Criterion (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 (15) 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 (16), which is plausibly already ruled out because it is uninterpretable (i.e. because the presence of *John* induces a Full Interpretation violation).

(16) *John seems that Peter likes Mary.

Based on these problems, Bošković (2002a), Epstein and Seely (1999), and Grohmann, Drury, and Castillo (2000) argue that the Merge-over Move preference should be abandoned. If the preference is abandoned a question arises how the data in (12), especially the ungrammaticality of (12)b, can be accounted for. Notice, however, that (12)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 (12)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 that, as indicated by the possibility of quantifier float in the following construction, movement to a higher, finite SpecIP still proceeds via intermediate infinitival SpecIPs:¹⁴

¹⁴See 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.

- (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

(17) 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. Note that, as discussed in Bošković (2002a), under the above analysis intermediate Is are treated like intermediate Cs. This means that 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 (18) and (20). However, when this condition is not met, intermediate SpecCPs/SpecIPs are not created. This is illustrated in (19) for intermediate C. Regarding intermediate I, as argued in Bošković (2002a), this is the case with traditional expletive raising constructions (21), where intermediate SpecIPs are not filled.

(18) What_i do you think [_{CP} t_i that John bought t_i]?

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

(20) Someone_i is likely [_{IP} t_i to be t_i in the garden].

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

Under this analysis, intermediate Cs/SpecCPs and intermediate Is/SpecIPs are treated in the same way in all relevant respects, (20) being the IP counterpart of (18), and (21) the IP counterpart of (19). In Bošković (2002a) I give a number of empirical arguments that the intermediate SpecIP in expletive constructions like (21) is indeed not created, which means that the expletive is generated in its surface position, without undergoing raising from the infinitival SpecIP. Under Bošković's (2002a) analysis, this is quite generally the case in traditional expletive raising constructions: the

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].

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 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 from Bošković (2002a) concerns the experiencer blocking effect in French (see Bošković 2002 for a number of additional arguments).

As discussed in Chomsky (1995:305) and McGinnis (1998a,b), like many other languages, French disallows raising across an experiencer. This is illustrated in (22).

- (22) a. *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.’
- b. *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.’

According to Chomsky and McGinnis, what we are dealing with in (22) 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.¹⁵

Significantly, the expletive counterparts of (22) are acceptable, as shown in (23).

- (23) a. 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.’
- b. 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.’

¹⁵See the above references and Boeckx (2000b), Collins (2003), Stepanov (2002), and Torrego (1996), among others, for discussion of why the English counterparts of (22) are acceptable.

There is an obvious, principled account of the contrast between (22) and (23): in contrast to (22)a-b, (23)a-b do not involve A-movement across an A-specifier. In other words, in contrast to the matrix subject (22)a-b, the matrix subject in (23)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 (22) and (23).¹⁶)

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

- (24) ?*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 (24). 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 (23). The contrast between (24) and (23) thus provides 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.¹⁷ This confirms the parallelism between

¹⁶The reader is referred to Bošković (2002a) for discussion of an interfering factor that arises in Spanish. Note also that regarding the question of whether the experiencer would block the agreement relation between the indefinite and I, the question does not arise in French, where I does not agree with the indefinite. For relevant discussion of English, see Boeckx (1999), who shows that in English the experiencer can interfere with establishing of an agreement relation between I and a lower indefinite.

¹⁷This 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

intermediate IPs and intermediate CPs, illustrated in (18)/(19) and (20)/(21).¹⁸

A question arises now how to handle languages that have overt reflexes of agreement with intermediate heads under *wh*-movement. Note first that while Bošković (2002a) argues that English (and other languages considered) do not have feature checking in intermediate positions, this does not necessarily have to hold for all languages. In other words, while the feature checking analysis requires feature checking in all intermediate positions for all languages, a Takahashi-style analysis in principle allows for the existence of both languages without feature checking in intermediate positions and languages with feature checking in intermediate positions. Thus, a Takahashi-style analysis can easily allow for feature checking in intermediate SpecCPs in, for example, Selayarese, a language that is traditionally considered to have intermediate *wh*-agreement. However, we would then expect the language to pass the tests for intermediate C-agreement. For example, all else being equal (and it may not be), we would expect intermediate Cs to license ellipsis in Selayarese (see also footnote 68). Along the same lines, a language with a feature-checking requirement on the raising infinitival I should exhibit the experiencer blocking effect with expletives (provided that it has the effect in the first place), and partial associate raising in expletive constructions. Recall, however, that while a Takahashi-style analysis allows for the possibility of crosslinguistic variation regarding intermediate feature checking (as well as variation within a particular language with respect to particular intermediate heads), the feature-checking analysis does not allow for it; under this analysis all languages are required to consistently display feature checking with intermediate heads. This means that a Takahashi-style analysis can in principle handle Selayarese, while the data regarding the lack of feature checking in intermediate positions discussed above (and more generally in

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, according to which an element must have an uninterpretable feature to be able to undergo movement (see the next section), 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.

¹⁸It is also worth noting that Ormazabal (1995) argues that all raising and ECM infinitivals are CPs (certain quantifier float data noted in McCloskey 2000a also point to this conclusion). Under this analysis, the intermediate landing sites of raising and ECM infinitives could 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. (Notice also that in the current phase system, SpecCP would not always 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 such movement.)

Bošković 2002a and Boeckx 2003) raise serious problems for the feature-checking analysis.

It is, however, worth noting here that, as pointed out in Boeckx (2003, 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. Consider, for example, the following data from Selayarese, taken from Finer (1997), which were also discussed in this context by Boeckx (2003, 2004).

(25) a. La-?alle-i doe?-iñjo i Baso?

3-take-3 money-the h Baso

‘Baso took the money.’

b. Ku-keo?-ko

1-call-2FAM

‘I called you.’

(26) Ku-isse?-*(i) *(kuko) la-?alle-i doe?-iñjo i Baso?

1s-know-3 COMP 3-take-3 money-the h Baso

‘I know that Baso took the money.’

(27) Apa mu-isse? la-?alle _ i Baso?

what 2FAM-know 3-take h Baso

‘What do you know that Baso took?’

Selayarese is a VOS language. In (25), we see that the verb displays both subject (cf. the prefix) and

object (cf. the suffix) agreement. (26) illustrates object agreement between the verb and a clausal object (note that the complementizer is obligatory). As shown in (27), object agreement (as well as the complementizer) must be absent in the case of *wh*-movement.¹⁹ The agreement with the *wh*-phrase is thus only indirect: *wh*-movement has the effect of disrupting agreement between the verb and the C. (In many languages that are traditionally assumed to have overt intermediate C-reflexes of *wh*-movement, the paradigm in question cannot be repeated in its entirety due to the lack of overt verbal object agreement; however, it is certainly possible that such languages actually behave like Selayarese in the relevant respect, the only difference being that the verb does not show overt object agreement. The reader is also referred to Noonan 1999 for a reanalysis of traditional *wh*-C agreement in Irish, which according to Noonan does not involve such agreement at all. More precisely, Noonan argues that what is traditionally considered to be a special *wh*-agreeing C in Irish is not a C at all. See McCloskey 2000b: 201 for another perspective on Irish.) I conclude therefore with Boeckx (2003, 2004) that it is not clear at all that there are any languages with true intermediate *wh*-agreement.²⁰ I would also like to adopt the following analysis for the Selayarese paradigm in (25)-(27), roughly following Finer (1997): let us assume that overt object agreement is a direct reflex of object shift, i.e. overt movement to SpecAgroP/SpecvP. This means that both the agreeing direct object NP in (25) and the agreeing direct object clause in (26) move overtly to SpecAgroP/SpecvP. Now, Takahashi (1994) (see also Ormazabal, Uriagereka, and Uribe-Echevarria 1994) shows that *wh*-movement out of heads of non-trivial chains (i.e. *wh*-movement out of moved elements) is crosslinguistically impossible.²¹ The *wh*-phrase then cannot move out of an object-shifted clause.

¹⁹According to Finer (1997), the absence of the complementizer and object agreement is obligatory in this case. (In the case of further embedding of the lowest clause in (27), all intermediate Vs and Cs pattern with the matrix V/embedded C in (27) in this respect, which is accounted for under the analysis suggested below.) Object agreement is also missing on the lower verb in (27) for independent reasons discussed in Boeckx (2003). Note that I ignore the resumptive pronoun construction, where a complementizer appears in the embedded clause (but clausal object agreement is missing, which Finer interprets as indicating that some movement is taking place even in the context of resumption).

²⁰Boeckx (2004) actually gives Kinande as the only plausible candidate for true (i.e. direct) intermediate *wh*-agreement. However, he also suggests an analysis of Kinande that does not appeal to agreement between a *wh*-phrase and intermediate heads on the path of successive cyclic movement.

²¹For example, this is what is responsible for the Subject Condition effect, i.e. the ban on movement out of subjects in SpecIP, which have moved to SpecIP from a lower position. Takahashi also demonstrates that *wh*-movement out of an element in SpecCP, which is standardly assumed to be possible, actually leads to a locality violation.

This means that wh-movement out of an agreeing clausal object is impossible. This explains why a clause from which a wh-phrase has been extracted cannot agree with the verb. I also make the natural assumption that the lack of overt object agreement means the lack of overt movement to SpecAgroP/SpecvP. The reason why wh-movement is possible only when the clause fails to agree with the verb is then straightforward: only in that case, the clause does not move overtly to SpecAgroP/SpecvP, allowing wh-movement to proceed without a locality violation.²² We now have an account of the lack of agreement between the verb and the clause in (27), which contrasts with (26) in this respect. What about the absence of the overt complementizer in (27), which again contrasts with (26) in this respect? There are three possibilities here: (i) We can assume that the overt complementizer obligatorily agrees with the higher verb,²³ while the null complementizer does not; hence the null complementizer must co-occur with wh-movement (recall that the C cannot agree with the verb in the case of wh-extraction, since the agreement requires movement of the CP); (ii) C must always agree with the verb, which means that a CP must move to SpecAgroP/SpecvP; what we are dealing with in (27) is an IP, which, in contrast to CP, does not move to SpecAgroP/SpecvP and does not agree with the verb; (iii) We are dealing here with something similar to the French *que-qui* alternation, with one modification: the null C is the counterpart of *qui*, and the overt C is the counterpart of *que*, with the modification that the extraction-problematic overt complementizer creates a problem not only for subject extraction (like French *que*), but for all extraction, just like the indicative complementizer in Russian does (the null C is then used to rescue all extraction). I conclude therefore that the paradigm in (25)-(27) can be analyzed without positing intermediate wh-agreement.

To summarize, we have seen that there is no feature checking in intermediate positions of successive cyclic movement (the reader is referred to Bošković 2002a and Boeckx 2003 for additional arguments to this effect). This means that we cannot accept Chomsky's current theory of successive cyclic movement, which relies on intermediate feature checking. The alternative available in the literature is Takahashi's approach, which does not need intermediate feature checking, but it

²²This means that a clause can exceptionally remain in situ to make wh-movement possible. I leave for future research explaining this state of affairs. (This kind of exceptional placement has been noted with respect to other phenomena as well; see, for example, the discussion of ellipsis and affix hopping in Bošković 2001, 2004c.)

²³As discussed by Finer (1997), there are in fact certain obligatory changes in the morphological form of the overt complementizer that depend on the material in the higher clause.

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. 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.²⁴

3. The Activation Condition and successive cyclic movement: Deducing the Activation Condition

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.²⁵ According to Chomsky, 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 (28) does not have any uninterpretable features. uK is checked as a reflex of the F-feature checking relation.)

(28) W Y
 uF iF
 EPP

²⁴Notice that I assume that covert dependencies involve Agree, as in Chomsky (1999, 2000), i.e., I do not adopt the Nissenbaum (2000)/Chomsky (2001) proposal that both overt and covert dependencies involve movement, but differ in the timing of the transfer of its result to Spell-Out.

²⁵For Chomsky, the AC also holds for Agree. However, I will argue below that Agree should not be constrained by the AC.

(29) W	Y
uF	iF
EPP	uK

The scenario in (29) conforms with the AC, and the one in (28) does not. It appears that in (28) 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 (28) 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 problem noted above. In particular, I would like to propose that the AC is only needed to implement successive cyclic movement; in particular, movement that crosses phase boundaries.²⁶

Consider the following scenario, where XP is a phase, and Y needs to undergo movement whose final landing site W is outside of XP ((30)). In the scenario under consideration, Y needs to undergo successive cyclic movement to W, via SpecXP. In accordance with the AC, Y has an uninterpretable feature K, which makes it visible for movement. (31) represents the same scenario, but before W enters the structure. (I assume that K is either checked as a reflex of F-feature checking

²⁶There are several recent works which show that, as it is, Chomsky's phase system, where only CP and vP are phases, is empirically inadequate due to the paucity of intermediate landing sites (recall that in Chomsky's system, 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) and Boeckx (2003) 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), as in Takahashi's (1994) approach to successive cyclic movement (but see Abels 2003). Adopting this into a phase-based system would lead to the conclusion that every phrase is a phase (see also 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 (see Epstein and Seely 1999, Bošković 2002a, and Boeckx and Grohmann 2004 for problems for Chomsky's way of making CP and vP special in this respect). 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 vP, or the Bošković/Boeckx/Takahashi view (see also Manzini 1994), 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 (1999, 2000) (i.e. with only CPs and vPs being phases, see also footnote 18), or the phase update of Bošković/Boeckx/Takahashi (with every phrase being a phase), the choice between the two being immaterial for our current purposes.

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.)²⁷

(30) W [_{XP} ...X...Y]

uF iF
k uK

EPP

(31) [_{XP} ...X.....Y]

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 further 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 (31) we need to know that W will enter the structure later, as in (30)). As discussed above, such

²⁷The latter option is simpler, since the former option 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 possibilities. Notice also that in Chomsky's (1995) system, the uK of Y would be a fully specified feature in need of checking, whereas in Chomsky's (1999, 2000) 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 2004). 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), which makes feature checking rather cumbersome (see the point made above) and leads to a proliferation of features involved in checking. Also, while the valuation (i.e. underspecification) approach in general may have some empirical plausibility with respect to ϕ -features (see Pesetsky and Torrego 2004), it is very difficult to motivate it empirically with respect to other features. 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 (2004d) empirical evidence for the superiority of the checking approach. The reader should bear in mind that the discussion below is stated in terms of feature checking, not valuation.

look-ahead is obviously problematic.

Consider now what we need to accomplish in (31). We need to know that Y will eventually need to move outside of XP, so that we move it to SpecXP in (31), 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 (31)? 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 be 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 (31)).²⁸ All of this would be repeated on any higher phase level.

Notice that under this analysis there is no need to mark the intermediate head (X in (30)) 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 on the moving element. We will see in section 5 that under the current analysis, the generalized EPP effect, which is in Chomsky's 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 5, I will continue the discussion assuming the mechanism, but only for final targets of movement).

Under the current analysis, the AC is needed to implement successive cyclic movement. However, it is no longer a principle, but essentially a theorem, with an interesting twist that the AC

²⁸At 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 will inevitably lead to a crash. (A similar proposal is made independently in Franks and Lavine 2004, 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.) The situation will be simplified under the proposals made below: I will argue that the uK feature simply indicates that Y needs to move—more precisely, because of the presence of uK, Y needs to move to SpecXP in order to avoid being sent to Spell-Out (the relevant assumption being that complements of phase heads are sent to Spell-Out; see the discussion in section 4 for what goes wrong if Y is sent to Spell-Out). This means that movement to SpecXP is *immediately* “helping” Y.

I will also argue below that checking of an uninterpretable feature K on Y requires Y to function as a probe, as a result of which Y needs to c-command the checker. This means that Y in (30) has to move to SpecWP to function as a probe. As a result, even when W does not have the EPP feature Y cannot remain in the Spec of the phase head just below W, checking all the relevant features (in other words, we would be dealing here with Move rather than pure Agree regardless of whether W has an EPP feature or not).

must hold only for the cases where Y needs to move outside of a phase to check a feature.²⁹ 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 (see here footnote 28). However, as noted above, there is no need to have the AC as an independent principle. Y in (30) can either have uK or not.³⁰ If it does not, Y will never move 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 (30) 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.³¹ 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 2, 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

²⁹If there is no phase boundary between X and Y, Y does not need uK to move to SpecXP (see, however, the discussion below, which will require uK on Y even in this case for reasons independent of our current concerns).

³⁰There are several possibilities here: the same lexical item can optionally receive uK, or we are dealing with two different lexical items, one having uK, and one not. In other words, there are two derivations to consider: the one where Y has uK, and the one where it does not have it. (Some lexical items always have uK, for example nouns—this is the traditional Case Filter.)

³¹This would be the case even if we follow Chomsky in assuming that EPP-driven movement involves feature checking since movement to SpecXP is not EPP-driven.

relations with intermediate heads, we have now deduced the effects of the AC. In other words, successive cyclic movement now works as it should, and we have understood the role of the AC, which is no longer a blatant stipulation.³²

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. This is a departure from Chomsky (1999, 2000), where the AC holds for both Move and Agree, but as a matter of principle. I will return in section 5 to this consequence of the current analysis, putting it aside for the moment.

4. Phases and successive cyclic movement

Let us now consider in more detail the relevance of phases in the syntactic computation, under the assumption that multiple Spell-Out holds (see Epstein 1999 and Uriagereka 1999). Chomsky (1999, 2000) proposes that phases determine which chunks of syntactic structure are shipped to Spell-Out, an assumption that I also adopt here. Following Chomsky (1999), I will also assume that once we reach a phase, everything but the edge of the phase, which means the complement of the phase, is shipped to Spell-Out. At that point we establish word order in the unit that is sent to Spell-Out. Following Fox and Pesetsky (in press), I assume that once we establish word order within that unit, the order of the relevant elements is frozen—it can no longer be changed. However, I would like to make a stronger point than Fox and Pesetsky (in press) do here. I propose that once Y is ordered within a spell-out unit K, the phonology cannot receive any higher unit with new information concerning the word order of Y: information regarding word order of Y is shipped to the phonology only once. In other words, the following cannot happen: spell-out unit K sends information to the phonology that contains Y, therefore establishing word order for Y. A higher spell-out unit K' then

³²Regarding Superiority, it can no longer be stated as an Attract Closest requirement. There are several ways of instantiating Superiority effects in the current 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 (see Park in preparation for an implementation of this analysis that is fully compatible with the current system). 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). I leave for future research exploration of these options for proper treatment of Superiority effects, merely noting here that the first option is easily extendable to other cases of intervention effects.

sends information to the phonology that also contains Y, but not as part of K (Y would be in a new position as a result of movement of Y from K to K'). This means that no more than one spell-out unit can send information to the phonology regarding any element Y.³³ This assumption straightforwardly resolves a serious issue that arises under most other approaches. If, due to the application of multiple Spell-Out, the phonology can receive more than one input regarding Y, how can the phonology know how to combine the different inputs regarding Y, which are likely to be conflicting (see Ausín 2001 for some relevant discussion)? Under the current approach, this situation cannot arise since Spell-Out cannot apply more than once to any element, even in the multiple Spell-Out system.³⁴ Since phases determine what is sent to the phonology, this gives us the freezing effect of phases: if something will ever move, then it cannot be contained in a unit that is shipped to Spell-Out.³⁵ This way we deduce PIC effects: Y has to move to SpecXP, XP a phase, in order not to get caught in a spell-out unit, which would freeze it for pronunciation purposes. The freezing effect of phases, with the PIC as an escape hatch, follows. As in the Fox and Pesetsky (in press) analysis, 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.³⁶ Since we have already achieved the

³³I am ignoring here lower spell-out units that are contained within higher units—those chunks of structure have already been operated on (and linearized) by the phonology so that the phonology examines only new structure that higher spell-out units add.

³⁴Notice also that, in contrast to the Fox and Pesetsky analysis, under the current analysis there is no need to keep track of ordering statements, which violate the Inclusiveness Condition.

³⁵For the moment, I ignore the copy theory of movement, returning to it below.

³⁶This point is in the spirit of Fox and Pesetsky, but the actual implementation of the point is rather different (see also footnote 34). As a result, in a number of cases where successive cyclic movement would not be forced to proceed via the Spec of a phase head under the Fox and Pesetsky analysis, it will still be forced to do so under the current analysis. For example, it appears that under the Fox and Pesetsky analysis, subject wh-movement in (i) would not (have to) proceed via the embedded clause SpecCP, while on the current analysis it would have to proceed via the position in question. (I leave for future research exploring in more detail empirical differences between the Fox and Pesetsky analysis and the current analysis.)

(i) Who_i do you think [_{CP} [_{IP} t_i likes Mary]]?

It is also worth noting that Fox and Pesetsky do leave room for syntax to play a role in successive cyclic movement. Although in their analysis successive cyclic movement via edges of phases is often crucial for pronunciation, they seem to leave it up to syntax to determine when such movement is allowed or prohibited (they in fact hint at syntactic feature checking in intermediate positions). On the other hand, under the current analysis, this is not the case: movement to the Spec of intermediate phase heads is indeed pronunciation-driven (see also the discussion of Agree below). As a result, it could be said that the current analysis, which follows the Fox and Pesetsky insight regarding

PIC effect via PF, it would be redundant to duplicate the phase/PIC effect in the syntax, which would happen if on top of the proposals made above, we 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). I therefore follow Fox and Pesetsky (in press) in assuming that the PIC should be eliminated as a syntactic locality condition. In other words, phases and PIC have no direct relevance for the locality of syntax, the only thing that they determine is what is shipped to Spell-Out (i.e. units of multiple Spell-Out). However, indirectly, they still end up forcing successive cyclic movement. But since phases have no direct relevance to syntax, they do not represent syntactically opaque domains, which means that in the syntax itself phases are accessible from the outside. And the PIC has no status whatsoever (PIC effects for successive cyclic movement are deduced from Chomsky's 1999 claim that the phonology works on the complement of the phase head).

Chomsky (2000) proposed that phases hold for a number of different domains, each time this being stated as a matter of principle, i.e. by stipulation. The line of research pursued here, in the spirit of Fox and Pesetsky (in press), is to have as many applications of phases to different domains follow as a matter of theorem, not principle. Thus, for Chomsky (2000), phases are relevant to multiple Spell-Out and the locality of syntax, each time as a matter of principle.³⁷ In the current system, which in the relevant respect follows Fox and Pesetsky, phases hold for multiple Spell-Out as a matter of principle, but their relevance to the locality of syntax is theorematic, which means we understand it.

Having outlined the analysis to be pursued, let us consider in more detail how the freezing effect of PF on elements that are sent to Spell-Out is achieved. Suppose Y moves to SpecXP, XP a phase, and then the complement of the X phase head, which contains a copy of Y under the copy theory of movement, is sent to Spell-Out. We still have a situation where the phonology gets information regarding where to pronounce Y more than once: in the initial spell-out domain (complement of X), and in at least one higher domain. The issue can be handled straightforwardly

the role of pronunciation in successive cyclic movement, is actually more in the spirit of the Fox and Pesetsky analysis than the actual implementation of the insight in Fox and Pesetsky's paper.

³⁷Chomsky (1999), on the other hand, hints at the possibility of linking the two, but additional assumptions are needed to achieve that. Note also that without additional assumptions, which I will not be adopting here (apart from the proposals made above), sending a chunk of structure X to Spell-Out will not freeze X for syntactic computation (see here footnote 40).

if we assume that pronunciation is fixed only for heads of trivial chains (more precisely, *full* chains), not for lower elements in non-trivial chains; otherwise, a question will arise how lower copy pronunciation motivated by PF considerations, which has ample empirical motivation (see Abels 2001, Bobaljik 2002, Bošković 2001, 2002b, 2004b, Bošković and Nunes 2004, Franks 1998, Hiramatsu 2000, Lambova 2002, 2004, Landau 2003, Nunes 2004, Pesetsky 1997, 1998, Reglero 2004, and Stjepanović 1999, 2003), can ever be allowed. This means that no problems will arise (i.e. PF will not freeze Y for pronunciation) if at the point when Y is first sent to Spell-Out, Y is not the head of a trivial chain (i.e. it is not a full chain). Accordingly, we can escape the freezing effect of Spell-Out if Y moves to SpecXP, so that the first time Y is sent to Spell-Out, which is when the complement of X is sent to Spell-Out, Y within the complement of X is not the head of a trivial chain (i.e. it is not a complete chain). If instead of moving Y to SpecXP we wait and move Y to the Spec of a higher phase head Z in the following configuration

(32) [_{ZP} [_{XP} X...Y]]

where both ZP and XP are phases, there will be a problem: when the complement of the X phase head is sent to Spell-Out, Y, which is contained within it, is the head of a trivial chain, which means its pronunciation will be fixed. This has the effect of freezing Y for movement, since movement of Y will result in sending additional information to the phonology regarding the pronunciation of Y, which is disallowed, as discussed above.

The above analysis can also be instantiated as follows under the copy theory of movement:³⁸ what is sent to the phonology is the whole phase XP, but the phonology works only on the complement of the phase head (i.e., the phonology “sees” the whole phase XP, but works only on the complement of X). This means that if Y moves to SpecXP, the phonology will “know” that Y in the complement of X, the spell-out domain, is a lower copy (i.e. it is not a complete chain) since it sees another copy of Y. If Y does not move to SpecXP, the phonology will see only one copy of Y, which means Y will be a complete chain for the phonology. Consequently, the phonology will

³⁸As noted by Steven Franks (p.c.), the following assumption is not necessary under the remerger theory of movement.

determine the pronunciation of Y, thus freezing it in place in the complement of X, the spell-out domain. Later movement of Y to SpecZP in (32) will then lead to a violation, as discussed above. If Y does move to SpecXP, then in accordance with the assumption, argued for in the above references (see especially Franks 1998 and Bošković 2001, 2002b), that the head of a non-trivial chain is pronounced unless the pronunciation of the head would lead to a PF violation,³⁹ Y in the complement of X will be marked for deletion, provided that there is nothing wrong with the phonological realization of the higher copy of Y. The procedure will be repeated on any higher phase level. This way the possibility of phonologically realizing Y will be pushed up through successive phases, until the final target is reached.

Let us consider the issue with respect to the abstract structure in (33), where A, B, and C are phases, and X1-X4 members of the same non-trivial chain, with the pronunciation of X1 being blocked by a PF requirement, and X2 and X3 located at phase edges (i.e. Specs of B and C).

(33) [_A X1 [_B X2 [_C X3 X4]]] (X1 cannot be pronounced due to a PF violation)

The first spell-out unit is determined by the phase C, which contains two members of the X-chain. (Recall that the phonology sees the whole phase C, but works only on the complement of the phase head.) Given that the pronunciation of X3 would not result in a PF violation, at the point when this unit is sent to Spell-Out X4 will be marked for deletion (see (34)a). Then, in the syntax we build the structure in B, which contains another copy of the X-chain, again sending structure to Spell-Out. Given the preference for the PF realization of the highest copy, at this point X3 is marked for deletion (see (34)b). Finally, phase A is added in the syntax, and the whole structure is again sent to Spell-Out. Given that the pronunciation of X1 leads to a PF violation, X1 is deleted, with X2 remaining as the sole survivor of the copy-deletion process (see (34)c).

(34) a. [_C X3 ~~X4~~]

b. [_B X2 [_C ~~X3~~ ~~X4~~]]

³⁹See Nunes (2004) for an explanation of why there is a preference for the pronunciation of the highest copy, and why this is only a preference, not an absolute requirement.

c. [_A X₁ [_B X₂ [_C X₃ X₄]]]

Since multiple Spell-Out pushes up the surviving copy of a non-trivial chain successively through higher spell-out units, this system naturally leads to the conclusion that the next highest copy is pronounced when the highest copy of a non-trivial chain cannot be pronounced due to a PF violation. This is precisely what has been argued for on empirical grounds in Franks (1998) and Bošković (2001, 2004b).

To summarize, 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. In other words, the PIC does not constrain Agree (the claim is also made in Stjepanović and Takahashi 2001).

The reduction of the direct effect of phases to the phonology (more precisely, the syntax-phonology interface), syntactic successive cyclic movement (implemented via the AC) being a side effect of this, has thus led us to posit a rather radical distinction between Move and Agree. While Move is constrained by the PIC (albeit indirectly), Agree is not.⁴⁰

⁴⁰Note also that if there is such a thing as LF feature movement, or LF phrasal movement, these would not be subject to the PIC, since they do not affect pronunciation. Recall also that, as noted in footnote 37, sending a unit X to Spell-Out in itself does 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 1995): the phonology was simply assumed to strip off the phonological features (i.e. the features it needs), all other features remaining in the syntax, where they 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 would 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 up a moving element, or pick a goal, as long as the target of movement, or the probe, is in the highest cycle; of course, reaching too deep into the structure for a moving element would often cause a pronunciation problem, as discussed above, but we do not need the syntactic cycle to rule out such cases (see, for example, the discussion of the

Recall also that we have used the AC above to implement successive cyclic movement. Since Agree does not involve movement at all, I concluded above that the AC should not hold for Agree either. This means that neither phases/PIC nor the AC constrain Agree.

5. Eliminating generalized EPP

Before exploring in more detail broader empirical consequences of this conception of Agree, consider the consequence of Agree not being subject to phases/PIC for (30)-(31). As discussed above, Y moves to SpecXP, XP a phase, so that the uK feature of Y can be eventually licensed. Recall, however, that phases/PIC are irrelevant to Agree. This means that uK can be in principle checked even if Y remains buried within a phase. But then there is no need to move Y to check uK, hence, by Last Resort, it should not be possible to move it (i.e. the need to check it could not drive movement). Now, Y (with uK) will eventually have to move for feature-checking purposes (because of W, which has an EPP feature), which means that there is a need to move it to SpecXP. However, we do not know this at the point that structure building has reached in (31), we will know this only once W enters the structure, as in (30). In other words, we need look-ahead: at the point when (31) has been built we need to know that W will eventually enter the structure. As noted above, such look-ahead is anyway needed in Chomsky's system. We could simply (regrettably) accept this as a fact of life. Let us, however, try to do better than this. The problem with (30) 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 (1999, 2000) system. For example, in this system, in order to decide whether *what* will be moving to the Spec of *that* in (35) we need to know at the point that structure building has reached in (35) whether the structure above (35) will be expanded as in (36) or (37). (I am ignoring here vP as a phase.)

(35) that John bought what

configuration in (32) above)); (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).

(36) Who thinks that John bought what

(37) Mary thinks that John bought what

The problem here is the same one we have faced above with respect to (31). 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. 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 does), and then place it on Y instead of W. Let us, however, try to do better than that. In fact, let us try to eliminate the EPP diacritic altogether.

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. Essentially following Epstein and Seely (1999) (see also Boeckx 2004) I would like to suggest 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 *only if* X c-commands the checker.⁴¹ This means that Y in (30) will need to undergo overt movement outside of XP in order

⁴¹The proposal implies that English has overt object shift, i.e. 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, Bošković 1997a,b, 2002a, 2004a, Epstein and Seely 1999, Johnson 1991, Koizumi 1995, Lasnik 1999, McCloskey 2000a, Runner 1998, Ura 1993, among others). The arguments are particularly strong regarding 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, see Bošković 2002a). I also assume the partitive Case hypothesis regarding Case assignment to the associate of *there*, where the associate may undergo overt Case-licensing movement (see footnote 13). Again, there are a number of arguments in the literature for partitive Case licensing (see, for example, Belletti 1988, Bošković 1997a, 2002a, Epstein and Seely 1999, Lasnik 1995, 1999, and Martin 1992; see also these works for arguments that *there* has Case, an assumption that I also adopt here). Note also that, as discussed in Epstein and Seely (1999), there is a mutual c-command relation between an expletive in SpecIP and I: the expletive merges

to license its uK feature (i.e. pure Agree won't suffice for that even if Y is located in SpecXP, with no other phases intervening between Y and W), and we know that before W enters the structure (uK on Y 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. 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.⁴²

with the object that is labelled by I, hence is I, given that the label is the head (see Chomsky 1994); the expletive in SpecIP and I then c-command each other under Epstein's (1999) derivational approach to c-command. Given mutual c-command, the expletive and I can probe each other (if this is necessary, i.e. if I has an uninterpretable Case feature; see also Chomsky 1999 for the proposal that the expletive probes I). More generally, two elements in a Spec-head configuration can probe each other, i.e. they can serve as goals for each other (see also section 6.3. regarding the possibility of a resurrection of the Spec-head configuration as a feature checking configuration). There are then two options in a structure like the following: X(uK)...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).

What about languages that allow nominative NPs to follow the verb which does not move to C? Such NPs appear not to move to SpecIP overtly; still they receive nominative. There are several ways of accommodating the case under consideration: (a) Nominative Case in question is not an uninterpretable feature, which means it does not require movement to SpecIP (see Bošković in press b and references therein for evidence that some instances of Case are not uninterpretable); (b) Nominative Case in question is actually a default Case, hence not assigned by I; (c) 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 (see section 4), 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; (d) If there is an LF component which derivationally follows the overt syntax component, the nominatives in question could be undergoing phrasal movement to SpecIP in LF; (e) Postverbal nominatives are located in a rightward SpecIP (see Zubizarreta 1999 regarding Spanish). I leave further exploration of the options sketched above for future research. (Notice also that since assuming a separate LF component that derivationally follows the overt syntax component leads to well-known theoretical complications, I will not be assuming it below, which rules out option (d).)

⁴²See also 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 2001 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), who explores the question of whether a feature to be checked needs to be lexically specified for the exact feature-checking configuration (Spec-head or head-head), an issue that should have received more attention in the literature. (On the basis of the Slavic *li*-construction, I suggest that checking through head movement may in fact be an unmarked option (all else being equal, which it rarely is), which makes sense given that it involves shorter movement than checking via movement to Spec. For relevant discussion, see also Nunes 1998 and Alexiadou and Anagnostopoulou 1999.)

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.⁴³

There is another consequence of the current analysis: we have just deduced the generalized EPP effect. (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.) Thus, Y in (30) will now have to move to SpecWP even if W does not have the EPP property, which is then dispensable. Under the current analysis, generalized EPP effects follow from the AC (i.e. the uK of the moving element), which itself follows from something else. As far as I can tell, this is the first time we have been able to achieve this in the Minimalist program. Since the beginning of the 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 diacritic, which indicates that certain heads need Specifiers. In the current approach, 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, for the first time, the generalized EPP effect is stated as a property of the moving element, not the target, which, as discussed above, has helped us analyze without look-ahead constructions where we need to know

Duk-Ho An (p.c.) suggests an interesting alternative to the analysis presented in the text; namely, he suggests considering uninterpretable features to be illegitimate PF objects, as in Chomsky (1993). As a result, Y, with uK , could not be sent to Spell-Out, since that would cause a crash in PF. This means that Y would have to move to the edge of the phase to escape being sent to Spell-Out (the copy theory of movement can be accommodated as discussed above, so that the copy of Y in the spell-out domain is deleted.). The reason why I adopt the uninterpretable-feature-must-function-as-a-probe analysis rather than the illegitimate-PF-object analysis is that the former enables us to dispense with the generalized EPP effect (i.e. the I-need-a-Spec property of target heads), as discussed below.

⁴³There are a couple of exceptions. One of them has to do with 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), and the other one involves configurations like (i), where the relation between X and Y can involve pure Agree, with X being a probe and Y a goal. However, Y will still eventually move to SpecZP so that it can probe Z.

(i) Z (iK) X (uF) Y (iF, uK)

whether overt movement movement will take place before its target enters the structure.⁴⁴

In light of the above discussion, consider (38), the case of the traditional EPP effect.

(38) *Arrived John.

(39) cf. John_i arrived t_i.

Like all nouns, *John* has an uninterpretable Case feature uK (which is a minimalist instantiation of the traditional Case Filter). To check the feature, *John* has to move to SpecIP, so that it can probe I. (38) 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.⁴⁵ 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.

Several recent works (see Boeckx 2000a, Bošković 2002a, Epstein and Seely 1999, Grohmann, Drury, and Castillo 2000, and Martin 1999) that attempt to eliminate the traditional EPP account for (38) by appealing to the Inverse Case Filter (see Bošković 1997a), more precisely, the requirement that traditional Case assigners *must* check/assign their Case in a Spec-head configuration. Under the current analysis, there is no need to appeal to either the EPP or the Inverse Case Filter to account for (38), i.e. they both may be dispensable. All we need is (a version of) the traditional Case Filter.⁴⁶

Under the analysis proposed here, the Case Filter, which under various guises has been assumed throughout the GB and the Minimalist frameworks (stated as a checking/valuation

⁴⁴This is quite generally in line with the move in the current system to moving-element-driven movement, as opposed to target-driven movement.

⁴⁵The analysis leads to the adoption of overt object shift, see in this respect footnote 41. As for quirky subject constructions in languages like Icelandic, they can be straightforwardly accounted for given that, as argued by a number of authors (see, for example, Bejar and Massam 1999, Belletti 1988, Bošković 2002a, Chomsky 2000:127, Cowper 1988, Frampton and Gutmann 1999, and Freidin and Sprouse 1991), quirky subjects have a structural Case, which is not morphologically realized, on top of the inherent Case. Their movement to SpecIP can then be driven by the need to check this Case.

⁴⁶Traditional 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 existence of verbs that appear to assign Case only optionally. (Compare *John laughed* with *John laughed himself silly*, cf. also *Mary is dressing (herself)* and *Peter is eating (apples)*; see also Franks 2002 for empirical problems for the Inverse Case Filter.)

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.

Consider now the following constructions (note that (40) is not a question):

(40) *_[IP] Is someone in the garden].

(41) _[IP] Someone is in the garden].

(42) _[IP] There is someone in the garden].

Recall that, as noted in footnote 41, I adopt the Belletti/Lasnik analysis of existential constructions, on which *there* has Case, and its associate bears partitive Case. Accounting for (42) under this analysis is straightforward. (The indefinite could actually be undergoing overt object shift, see footnote 41.) Partitive Case assignment is standardly assumed to be optional. The option is taken in (42), but not in (41), where the subject NP moves to SpecIP to license its structural nominative Case. Consider now (40). The derivation on which the partitive Case option is not taken can be easily accounted for since the Case feature of *someone* cannot be checked without a violation, as discussed above. Suppose, however, that we take the partitive Case option, in which case the indefinite NP would be Case-licensed by the verb (being an indefinite, the NP has the right kind of semantics for partitive Case, in contrast to *John* in (38)), raising the question of why the construction is ungrammatical. Obviously, the partitive Case derivation for (40) needs to be blocked. I propose that partitive Case can be assigned only in the presence of *there*, hence not in (40). Given that the partitive Case option cannot be taken, (40) can be accounted for in the same way as (38). 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.⁴⁷ However, following standard assumptions I assume that (at least in English)

⁴⁷Since under the current analysis, which in the relevant respect actually follows Chomsky (1995) (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

the traditional NP must always have the DP layer. What about example (42), where the associate of *there* bears partitive Case, hence must be an NP? Here I adopt the intriguing proposal made in Chomsky (1995) (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.⁴⁸ We have now accomplished what we 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 (40), as desired. Most importantly, the paradigm in (40)-(42) 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 for the presence of *there* in (42)), in accordance with the current attempt to eliminate the mechanisms in question.⁴⁹

Consider now how the typology of multiple question formation would be stated in the current system. (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. Hence, they would all undergo A'-movement. In a wh-in-situ language like Chinese, wh-phrases would not have the uK feature in question, hence they would remain in situ. I assume that they would be unselectively bound, the underlying assumption being that, to be properly interpreted, a wh-phrase must either

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 an NP could actually be a higher functional projection.

⁴⁸If 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 1999, 2000, 2001), in contrast to Chomsky (1993, 1995), 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. (See Bošković in press b for other cases of scattered DPs where both parts of the scattered DP must be Case-marked. See also Hornstein and Witkoś 2003 and Sabel 2000 for another version of Chomsky's complex DP analysis of the *there*-associate relation.)

⁴⁹In 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 and Picallo 2002) and the proposal that there is an expletive-associate relation between the expletive *it* and the clause (see Bošković 1997a and Tanaka 1995, who argue against McCloskey 1991 in this respect.)

move to an interrogative CP projection or be unselectively bound by an interrogative C (see Bošković 2000). As for English, we can capture it if English wh-phrases optionally have the uK 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.⁵⁰ We also need to adopt a condition like (43), a small price to pay given what is at stake here (eliminating the Generalized EPP), which is basically an unselective binding update of Chomsky's (1973) condition on the interpretation of wh-phrases and the +wh C in English. (I am only replacing with unselective binding Chomsky's assignment of a wh-phrase in situ to a +wh C that has a filled Spec.)

(43) Only a C with a wh-phrase in its Spec can unselectively bind a wh-phrase in English.

A consequence of the above assumptions regarding English is that exactly one wh-phrase will *always* move to SpecCP in English questions (see the discussion of (44) below). 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 above proposal that the mechanism in question should be dispensed with.

The current analysis also bears on the controversial issue of whether subject wh-phrases in constructions like (44) undergo movement to SpecCP (for recent discussion, see Agbayani 2000, An 2004, and Pesetsky and Torrego 2001).

(44) Who left?

Given that, as noted above, to be properly interpreted a wh-phrase must either move to an interrogative CP projection or be unselectively bound by an interrogative C, under the current

⁵⁰In Chomsky's system, *who* would need to have the uK feature in *Who did she say he gave the book to* (or it could not undergo wh-movement), but would not have it in *What did she say he gave to who* (the feature could not be checked due to the PIC and because the feature of the interrogative C that is responsible for checking the uK of a wh-phrase would be deleted by *what*). Note also that any analysis needs to state the fact that Bulgarian allows, and English does not allow, multiple Specifiers of C. I leave open whether the distinction can be captured in a deeper way than the one suggested in the text. (Another possibility under the current analysis is to assume that the feature of C that checks the uK of the wh-phrase disappears (erases and deletes in Chomsky's 1995 terms) after first checking in English, but not in Bulgarian; see also Pesetsky 2000 for a different perspective on this issue, where, like Bulgarian, English allows multiple SpecCPs in the syntax, but, in contrast to Bulgarian, does not allow pronunciation of more than one SpecCP in PF.)

analysis *who* in (44) in fact must move to SpecCP. There are two derivations to consider here, depending on whether or not *who* has the relevant uK feature. If *who* has the uK feature, it will move to SpecCP so that it can probe the C. On the other hand, if *who* does not have the uK feature, it will not move to SpecCP. Given (43), *who* cannot be bound by C either, which means that this derivation cannot yield a legitimate output. The current analysis thus leads us to the conclusion that *who* in (44) must move to SpecCP, as argued by An (2004) and Pesetsky and Torrego (2001).⁵¹

To summarize, I have argued in this section 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 current analysis, 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.

Notice also that, under the current analysis, in the configuration in (45), 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.

(45) X ... Y

The system thus puts strong restrictions on when we will have Move and when pure Agree. The

⁵¹Notice that, under (43), after *who* moves to SpecCP in *Who left what*, the wh-phrase in-situ can be unselectively bound. Note also that I assume that only the interrogative C can check the uK feature of wh-phrases. Example (4) is then ruled out either because the uK feature of *what* remains unchecked since it does not c-command an interrogative C (if *what* has the uK 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 uK feature). Regarding partial wh-movement languages, it is possible that in such languages the declarative C can check the uK 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 and Stepanov 2001). Alternatively, it is possible that a different feature is involved in partial wh-movement from the one we are concerned with here.

restrictiveness should be taken as a conceptual argument in its favor.

6. Agree is not subject to the PIC

6.1. Agree into finite clauses

Let us now look more closely at empirical consequences of the claim that Agree is not constrained by phases/PIC.

It is well-known that agreement configurations like the one in (46), where agreement holds between T/*v* and NP, reaching into a finite clause, are generally disallowed crosslinguistically (but see (50) below).⁵²

(46) T/*v* [_{CP(finite)}] [_{IP}] NP

The Agree relation between T/*v* and NP in (46) can be readily blocked by the PIC, since at least one phase boundary (CP) intervenes between T/*v* and NP. Can we block the Agree relation independently of the PIC? This is in fact straightforward. Given Agree closest, the CP clause is the closest candidate for agreement with T/*v*, preventing T/*v* from undergoing Agree with the NP.⁵³

The Agree closest analysis is based on the assumption that clauses are candidates for agreement, or more generally for subjecthood. There is plenty of empirical evidence to this effect. Recall that, as discussed above (see (26)), clauses clearly undergo agreement in Selayere. That clauses can undergo agreement even in English is shown by the following example from McCloskey (1991), where the conjoined clauses trigger plural agreement.

(47) That he'll resign and that he'll stay in office seem at this point equally possible.

It has been often claimed that clauses cannot be subjects (see Koster 1978 and Stowell 1981), a claim

⁵²Note that since I will not be taking a stand on the issue of the precise nature of I (whether I is actually T, or whether I should be split—see Bošković 2004a for recent discussion), I will interchangeably use I, T, and Agr.

⁵³See also Boeckx (2003). Note that the CP and the NP in (46) are not equidistant (see footnote 55 for relevant discussion of equidistance).

that one could try to relate to the impossibility of clauses undergoing processes associated with subjecthood, like agreement with T. The literature in question treats subject clauses as topics. However, there is strong evidence that clauses can in fact be subjects. (For additional arguments to this effect, see Bošković 1995, Delahunty 1983, and Kuno 1973. Bošković 1995 also addresses standard arguments for the topicalization analysis of subject clauses). Consider (48).

(48) *To John, that book, Mary gave.

(49) To me, that John likes Mary seems obvious.

(48) shows that multiple topicalization is disallowed. If subject clauses were topics rather than true subjects, (49) should be ruled out on a par with (48), because it would involve multiple topicalization. The grammaticality of (49) thus provides evidence that subject clauses are indeed subjects, not topics.

To summarize, we have seen that clauses can undergo Agree and move to subject position. Given this, the CP in (46) blocks the establishment of an Agree relation between T/*v* and NP via Agree closest. I conclude, therefore, that the PIC is not needed to block the Agree relation between T/*v* and the NP in (46). In fact, given that the PIC does that redundantly, we have here a conceptual argument against subjecting Agree to the PIC.

It is also worth noting that some languages do allow agreement to reach into a finite CP. One such language is Chukchee, as shown by the following example noted in Inènikèj and Nedjalkov (1973), also discussed in Mel'čuk (1988), Ura (1994), and Stjepanović and Takahashi (2001). (The last work discusses the data in the same context as I do here.)

(50) ənan qəlyiɭu ləŋərkə-nin-et [iŋqun pro Ø-rətəmjəv-nen-at qora-t].
 he-inst regrets-3-pl that 3sg-lost-3-pl reindeer-pl(nom)
 'He regrets that he lost the reindeers.'

The matrix v agrees with the embedded clause object in (50).⁵⁴ Taking into consideration the above discussion of (46), the data can be accounted for if we assume that the embedded CP in (50) has the option of not bearing ϕ -features (Chukchee CPs would not always have to be ϕ -featureless; this only needs to be an option), given that the PIC is irrelevant to Agree. (50) then provides evidence that the PIC does not constrain Agree, which is what Stjepanović and Takahashi (2001) also conclude regarding the example in question.⁵⁵

Having shown that the data regarding agreement into finite clauses do not raise a problem for the claim that the PIC/phases are irrelevant to Agree (in fact, they argue for it), I now turn to additional empirical arguments for the irrelevance of phases/PIC to Agree.

6.2. Chomsky (1999, 2000): The PIC may in fact be irrelevant to Agree

Chomsky (1999, 2000) subjects both Agree and Move to the PIC. Interestingly, he was forced to complicate his original (2000) definition of the PIC in Chomsky (1999) because of his subjecting Agree to the PIC (note that Chomsky 2000 antecedes Chomsky 1999). The relevant definitions from Chomsky (2000, 1999) are given below (slightly modified):

⁵⁴Apparently, agreement with the embedded clause subject is also possible at least in Alutor, which otherwise behaves like Chukchee in the relevant respect (see Mel'čuk 1988). Note that I leave open here why the null subject of the embedded clause in (50) does not interfere with the agreement relation in question.

⁵⁵Notice that we still would not expect to find this type of agreement with an NP that is embedded several clauses away from the relevant v , since intervening Vs would be inducing a blocking effect given the discussion in section 6.5. (see especially footnote 66).

Tsez and several Algonquian languages also allow agreement to reach into a finite clause. However, the relevance of the data regarding agreement into finite clauses in these languages to our current purposes is not completely clear. Thus, Polinsky and Potsdam (2001) argue regarding Tsez that agreement across a finite clause boundary is possible only if the object NP that agrees with the higher verb is located in the finite clause SpecCP (more precisely, in the Spec of the highest projection of the finite clause, which does not have to be a CP; I am ignoring this detail here). This is not surprising under the current analysis since in that case the CP and the NP would be equidistant from the higher v , so that the CP would not block agreement with the NP (the underlying assumption here is that XP and SpecXP are equidistant from a position outside of XP). The Agree relation between the NP in SpecCP and the higher v would also comply with the PIC. Notice, however, that Polinsky and Potsdam argue that the movement that brings the agreeing NP to the edge of the finite clause is LF movement since the relevant NP in many cases is clearly not located in the edge of that clause in overt syntax (their arguments for the LF movement analysis are actually not air-tight). The system of Chomsky (1999, 2000), which I am adopting here in the relevant respect, does not actually allow for such LF movement. Thus, it is not clear that the Polinsky and Potsdam analysis of Tsez, which would resolve the problem that the Tsez data raise for the assumption that the PIC constrains Agree, can be maintained.

(51) The Phase-Impenetrability Condition

In a phase α with head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations. (Chomsky 2000:108)

(52) Interpretation/evaluation for Ph1 is at Ph2, where Ph1 is a phase and Ph2 is the next highest phase. (Chomsky 1999:10)

Chomsky (1999) assumes that (52) holds for the PIC. The PIC is then restated as in (53):

(53) In $[_{ZP} \dots Z \dots [_{HP} \alpha [H YP]]]$, with HP a phase, and ZP the next phase, the domain of H is not accessible to operations at ZP, but only H and its edge. (Chomsky 1999:10)

In Chomsky (2000), the PIC simply says that Y contained in the complement of the phase head X is not accessible outside of XP. The effect of (52)-(53) is to complicate the PIC so that Y contained in the complement of the phase head X is not simply inaccessible outside of XP, but only once the next phase level is reached. Thus, while in Chomsky (2000) Z located outside of the phase XP cannot access Y located in the complement of X, in Chomsky (1999) Z can access Y in this configuration if Z itself is not the head of another phase, or located in the Spec, or higher than, another phase. Only if Z meets one of these requirements is Z prevented from accessing Y. The culprit for this complication of the definition of the PIC is Agree. More precisely, Chomsky wanted to exempt Agree from PIC effects in one configuration. Rather than making an explicit distinction in the locality effects of Move and Agree, which is what we are doing in this paper (see also Bobaljik and Wurmbrand in press), Chomsky complicated the definition of the PIC, which essentially hid the locality distinction between Move and Agree. The configuration in question is given in (54), where T agrees with NP, a nominative object in the complement of V. (Recall also that there is no need to subject Agree to the PIC in the configuration in (46).)

(54) T $[_{VP} \nu [_{VP} V NP$

Instead of complicating the relevant definitions of phases and the accompanying machinery, a simpler approach to take seems to be to endorse the claim argued for in this paper that Move is subject to phases/phase-related machinery, but Agree is not.⁵⁶

6.3. First conjunct agreement

In this section I will argue that the paradigm in (55)-(59) concerning first conjunct agreement in existential constructions in English, discussed in Munn (1993), Sobin (1994, 1997), and Bošković (1997a), among others, can be accounted for in a principled manner if Move, but not Agree, is subject to the PIC. (The analysis to be proposed below may be extendable to other instances of first conjunct agreement.)

(55) There is a woman and five men in the garden.

(56) *There are a woman and five men in the garden.

(57) *A woman is and five men in the garden.

(58) A woman and five men are in the garden.

(59) *A woman and five men is in the garden.

The above data show that the *there* existential construction is characterized by first conjunct agreement. Such agreement is impossible in the corresponding constructions involving movement of the indefinite. To account for the above paradigm, in the spirit of the fruitful line of research that argues for a uniform treatment of various phrases, which posits a clausal-type structure above them (see, for example, Abney 1987 and Szabolcsi 1984 for such a treatment of NPs, and Bošković in press a for such a treatment of PPs), I will assume that coordination phrases (BPs) should be treated in the same way. I therefore make the following assumptions:

1. BP is dominated by an Agreement Projection (Agr&P), where agreement relations are established (the projection corresponds to the clausal IP/AgrSP). Similarly to clausal subjects, the first conjunct,

⁵⁶I therefore do not adopt the complication in the treatment of PIC from Chomsky (1999) discussed above. The reader should bear this in mind.

which has been shown to asymmetrically c-command the second conjunct (see, for example, Munn 1993), is located in SpecAgr&P.

2. Similarly to clauses, there is a CP-like projection above Agr&P. I will refer to it as “BP”, which should not to be confused with BP. (Recall that Agr&P dominates BP. As noted above, Abney 1987 and Bošković in press apply these assumptions to the traditional NP and PP respectively, thus treating them in the same way as clauses. What I am suggesting here is to treat BP like clauses too.) This gives us the structure in (60) for the coordinated NP in (55) and (57). (I give the structure before *there*-insertion/movement of the indefinite.)

(60) T-is [_{BP} “B” [_{Agr&P} [_{NP1} a woman] [_{Agr&} and [_{NP2} five men]...

To instantiate the Coordinate Structure Constraint (CSC), I make the following assumptions: the extended projection of BP, the CP-like projection “BP”, is a phase, and “B” cannot have a Spec.⁵⁷ This gives us a straightforward account of the ungrammaticality of (57): since “BP” is a phase and “B” cannot have a Spec, *a woman* cannot move to SpecIP from SpecAgr&P without violating the PIC. What about (55) then? While movement of the first conjunct (i.e. movement out of “BP”) is impossible, agreement with the first conjunct (i.e. Agree into “BP”) is possible. This immediately follows under the current analysis given that phases and the PIC are irrelevant to Agree. We thus have an account of the different behavior of the first conjunct with respect to Move and Agree.⁵⁸

To summarize, I have suggested that the CSC is a PIC-type effect, and argued that the reason why, in contrast to movement, Agree is not subject to the CSC is that Agree is PIC-free. In other words, in contrast to Move, phases and the phase-related machinery are irrelevant to Agree. As

⁵⁷This is a rather mechanical implementation of the CSC in a phase-based system, which suffices for our purposes. I leave for future research addressing the important issues of the nature of the “BP” phasehood and the inability of “B” to license a Spec. There is an intriguing possibility here that all islands could be treated this way, which means that islands would be phases whose heads cannot have a Spec. I also leave exploring this possibility for future research. (The same holds for the rescuing effect of across-the-board movement.) Note also that for ease of exposition I will continue the discussion above under the assumption that phases/PIC are syntactic mechanisms. The analysis can be rather straightforwardly restated in the current system, which does not take phases/PIC to be syntactic mechanisms, but deduces syntactic phase/PIC effects from certain assumptions concerning multiple Spell-Out discussed above.

⁵⁸Note also that Agree closest favors agreement with NP1 to agreement with NP2 or any NP that would be embedded within NP1 or NP2.

discussed above, the distinction between Move and Agree needn't be stipulated; it follows from independently motivated assumptions. The reader should also bear in mind that quite independently of the current analysis, the data in (55)-(59) provide evidence that Move and Agree are subject to different locality restrictions, which is what I am arguing for here.

The paradigm in (55)-(59) raises a number of additional interesting issues that I can only briefly discuss here. First of all, the data appear to provide evidence that agreement without movement and agreement that accompanies movement do not work in the same way, contra Chomsky's (1999, 2000) position on this issue. One way of interpreting the data would be to assume that the agreement in (58)-(59) does not take place before movement (if that were the case, (59) should be good, and (58) bad, on a par with (55)-(56)), but after movement, an assumption that naturally leads to a resurrection of the Spec-head relation as a feature-checking relation (see also Niinuma and Park 2003). Under this analysis, in (55)-(56), the agreement would take place at a distance, through Agree. In (58)-(59), on the other hand, the agreement would take place after movement, via the Spec-head relation. The two would work differently. A question that arises under this analysis is why (for most speakers) the whole "BP" apparently cannot be targeted for Agree (if this were possible, (56), which Sobin's 1994 experimental data indicate is unacceptable, should be acceptable), although the "BP" apparently can undergo agreement in the Spec-head configuration (cf. (58)). I offer here a speculation regarding the impossibility of targeting "BP" with Agree. Suppose that targeting NP1 (which, as noted above, is higher than NP2) is more economical than targeting the whole "BP", as a result of which Agree with NP1 (see (55)) is preferred to Agree with the whole "BP" (see (56)). Regarding Move, since, as discussed above, extracting NP1 alone is not an option, the whole "BP" has to be moved. Given that the agreement relation that accompanies movement is established after movement in the Spec-head configuration, it follows that agreement with the whole "BP" is the only option under movement (this is the element that undergoes Spec-head agreement). Returning to pure Agree, why would Agree with NP1 in (60) be preferred to Agree with the whole "BP"? The question may be related to the issue of how the ϕ -features of both conjuncts (NP1 and NP2) are combined at the "BP" level. Apparently, the individual conjuncts somehow pass up their ϕ -features to the "BP", where they are combined. Suppose that there are certain syntactic operations, call them Y, that need to be done to accomplish this, which do not have

to take place when the agreement takes place with NP1 rather than the whole “BP”. Since the latter, but not the former, requires Y, agreement with NP1 would then be less costly than agreement with the “BP”.⁵⁹

There is an alternative analysis of the data under consideration that does not require resurrecting the Spec-head relation. Under this analysis, as in Chomsky (1999, 2000), agreement would consistently take place in the probe-goal relation—there would be no need to make a distinction between agreement without movement and agreement that accompanies movement. Note that I and the subject NP in (58)-(59) have to probe each other (they each have an uninterpretable feature checked by the other element.) The subject NP can probe I after movement to SpecIP. As discussed in footnote 41, I can probe the subject NP either before the subject NP moves to SpecIP, or after the subject NP moves to SpecIP (since a projection of I c-commands the subject after the movement, the c-command requirement on probing is satisfied), the choice between the two being immaterial for our current purposes. Under the probe-goal analysis we would need to make the natural assumption that Agree closest favors agreement with the whole subject to looking inside a subject for an element to Agree with. In other words, Agree closest favors (58) over (59).⁶⁰ What about (55)-(56)? I would like to suggest that agreement with the whole conjoined phrase is simply not an option here, which makes Agree closest considerations irrelevant. Following Lasnik (1995) and Bošković (1997a), suppose that the agreement relation in the *there* existential construction is established via *there*, which is freely generated with any agreement features. *There* then establishes an agreement relation with both I and its associate, which by transitivity end up agreeing with each other. In Lasnik (1995) and Bošković (1997a) the agreement between the expletive and the associate was established via a version of the expletive replacement hypothesis (more precisely, the adjunction

⁵⁹There is an issue of the cycle under this analysis: Y would apparently take place in (58), since agreement with the whole “BP” is the only option there, as discussed above. In fact, Y is likely to occur after movement to SpecIP, since the agreement takes place at this point (and we do not want to use look-ahead). To resolve the potential cycle problem, it is likely that some operations involved in Y would have to involve adjunction (for example, adjunction to Agr&P or “BP”), given that adjunction can be acyclic (see Lebeaux 1988, Chomsky 1993, Fox 2000, Nissenbaum 2000, Stepanov 2001, and Bošković 2004a, among many others).

⁶⁰Note that the probe-goal analysis and the Spec-head agreement analysis rely on mutually incompatible assumptions, the upshot of which is that under the probe-goal analysis agreement with the whole subject is favored, while on the Spec-head agreement analysis agreement with NP1 is favored. It is important not to mix up the assumptions that the two analyses rely on.

version of the hypothesis, see Chomsky 1991). On the other hand, under the analysis from section 5, the two have to agree because they belong to the same DP, the expletive being the DP layer, and the D and the N of the same DP undergo agreement. In Bošković (1997a), I suggested that “BP” cannot serve as an associate for *there*, the underlying assumption being that only NPs, in fact only NPs bearing partitive Case can serve as proper associates for the expletive *there* (see Lasnik 1995). *There* then has to agree with NP1 (recall that NP1 is closer to *there* than NP2). By transitivity, NP1 agrees with I. The gist of the analysis can be easily preserved under the analysis of expletive constructions adopted in section 5: since the agreement between the expletive and the associate is actually D-N(P) agreement, the expletive needs to agree with an N(P), rather than a “B”(P).

6.4. Agree and control

Stjepanović and Takahashi (2001) observe that Landau’s (2000) analysis of control also provides evidence that Agree is not constrained by the PIC. Consider the case of obligatory exhaustive subject control. Landau (2000), who argues that control infinitives are CPs, argues that obligatory exhaustive subject control involves an Agree relation between the ϕ -features of Tense and PRO.⁶¹ The relevant configuration is illustrated in (61).

(61) T [_{VP} [_{CP} [_{IP} PRO

There are two phasal boundaries between T and PRO. The most straightforward way to allow the establishment of a probe-goal relation between T and PRO in (61) is to dispense with the assumption that Agree is subject to the PIC—the intervening phasal boundaries in (61) then do not matter.⁶²

⁶¹Under Landau’s analysis, T also agrees with its subject, so that the subject and PRO indirectly end up agreeing with each other.

⁶²It might also be necessary to assume that infinitival CPs do not have (more precisely, do not have to have) ϕ -features, which seems plausible, so that the infinitive does not block the relevant Agree relation via Agree closest. Note also that Landau complicates the definition of the PIC to allow the Agree relation in question. As noted by Stjepanović and Takahashi (2001), a simpler approach to take is not to subject Agree to the PIC in the first place.

The argument given in this section of course depends on the viability of Landau’s theory of control, which is a controversial issue. For alternative minimalist analyses of control, see Martin (1996) and especially Hornstein (1999).

6.5. French *wh-in-situ* and Agree

In the previous sections we have seen arguments that Agree is not constrained by phases/PIC. In this section I will discuss one potential problem for this claim.

In Bošković (1998) I have argued, contra Huang (1982), that covert A'-movement is more local than overt A'-movement, based primarily on the distribution of French *wh-in-situ*. Following the assumptions of that time, in that paper I assumed that covert movement involves Move F. In the current framework, covert movement would involve Agree. This means that my 1998 conclusion should be interpreted as follows: Agree involving A'-dependencies is more local than movement involving A'-dependencies.⁶³ This raises a potential problem for the current system, where Move, but not Agree, is constrained by phases/PIC. In this section I will show that the problem is not real: it is possible to preserve the gist of Bošković's (1998) analysis of French *wh-in-situ*, updated to the Agree framework, without any problems for the current locality system, where Agree is free from some locality constraints that Move is subject to.

The crucial argument from Bošković (1998) that covert A'-dependencies are more local than overt movement A'-dependencies involves the following paradigm from French:

(62) *Jean et Pierre croient que Marie a vu qui?

Jean and Pierre believe that Marie has seen whom

'Whom do Jean and Pierre believe that Marie saw?'

(63) Qui Jean et Pierre croient-ils que Marie a vu?

(64) Marie a vu qui?

(62) shows that long-distance *wh-in-situ* is disallowed in French, although the language in principle allows matrix *wh-in-situ* (see (64)).⁶⁴ On the other hand, overt *wh-movement* in long-distance

⁶³For relevant discussion, see also Bobaljik and Wurmbrand (in press), who essentially extend my (1998) conclusion to A-dependencies.

⁶⁴The reader is referred to Bošković (1998) for discussion of the full paradigm regarding French *wh-in-situ*, which has a very limited distribution (see also Boeckx 2000c and Cheng and Rooryck 2000, among others). Note that I argued in Bošković (2000) that French *wh-in-situ* should not be analyzed in the same way as Japanese *wh-in-situ* (the latter should involve either overt null operator movement or unselective binding).

questions is allowed (see (63)). In Bošković (1998) I interpreted the contrast between (62) and (63) as indicating that covert A'-movement, i.e. Move F, which in the current framework should be reanalyzed as Agree, is more local than overt A'-movement (more precisely, the former is clause-bounded). How can the contrast in question be handled in the current system, which appears to lead to the conclusion that Agree should be less local than Move since, in contrast to Move, Agree is not constrained by phases/PIC? Consider first (62). The matrix C, the embedded C, and the wh-phrase should all be lexically specified for the wh-feature. True, the exact specification may be different (+, -, and unvalued being the options). Suppose, however, that this does not matter. In other words, what matters for relativized minimality type intervention effects (i.e. Agree closest) is the type of the feature, not its precise value. Given Agree closest, the matrix C then cannot establish an Agree relation with the embedded clause wh-phrase, due to the intervening embedded complementizer, which is specified for the wh-feature (more precisely, -wh, but the exact value of the wh-feature is irrelevant). The clause-boundedness of French wh-in-situ follows.⁶⁵ What about (63)? The intervention problem discussed above with respect to (62) does not arise in (63). As discussed above, in constructions like (63), the wh-phrase moves to the embedded clause SpecCP, crossing the embedded C, so that its uK feature does not get caught in the domain that is sent to Spell-Out. Furthermore, this is done at the point when the matrix C is not even present in the structure, which makes irrelevant the intervention effect discussed above with respect to (62) (Agree closest with the matrix C). Successive cyclic movement, which is independent of the final target of movement, thus makes it possible for the wh-phrase to leap over the embedded clause C, voiding the potential intervention effect.⁶⁶ We see here at work a rather interesting aspect of the current analysis: although

⁶⁵See Bošković (1998) for discussion of constructions like *Qui croit que Marie a vu qui* 'Who believes that Mary saw who?', which is acceptable. I argued that in this construction the matrix C undergoes feature checking with the matrix wh-phrase, which fully licenses the matrix C. This means that the C no longer needs to undergo feature-checking with the embedded clause wh-phrase, in contrast to (62), where the embedded clause wh-phrase is the only wh-phrase that can feature-check the interrogative matrix C. Notice also that in (64), no head specified for the wh-feature intervenes between the wh-phrase and the C.

⁶⁶The analysis may be extendable to the data that motivated Bobaljik and Wurmbrand's (in press) extension of Bošković's (1998) conclusion regarding A'-dependencies to A-dependencies. According to Bobaljik and Wurmbrand, T cannot enter into an agreement relation with the NP in the configuration in (i) in German, but this is possible in (ii). (Notice that Vs in (i-ii) are real verbs, not just vs.) Overt movement to SpecTP is possible even in the configuration in (i).

(i) T [_{VP} ∅ [_{VP} V NP]]

in principle we would expect Agree to be less local than Move since only the latter is subject to phases/PIC, in practice this is often not the case since with Move, successive cyclic movement makes possible skipping of potential interveners. In a sense, then, relativized minimality effects are "stronger" with Agree than with Move.

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. Several look-ahead problems that arise under recent minimalist approaches to successive cyclic movement have been resolved. 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/phases as locality domains of syntax and the Activation Condition hold, but only for movement, 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

(ii) T [_{VP} V NP]

Suppose that the higher, underlined V in (i) is an intervener for Agree, similar to the embedded C in (62). The lower V in (i) and the V in (ii) would not be interveners given that the V and the NP are equidistant from T. Regarding overt movement, NP could skip the higher V while undergoing successive cyclic movement, on a par with the wh-phrase in (63), which skips the embedded C while undergoing successive cyclic movement (here, I depart from Bobaljik and Wurmbrand). I leave spelling out the details of the analysis suggested here, and exploring its ramifications (which includes examining the full paradigm discussed by Bobaljik and Wurmbrand), for future research.

I have explored consequences of the Activation Condition/Phase-PIC free conception of Agree. I have also suggested an account of how the multiple Spell-Out system treats (i.e. linearizes) non-trivial chains whose members are located in more than one spell-out unit and proposed a restrictive theory of when a feature is checked by Move and when by pure Agree. 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.

A number of issues have still been left open. This is necessary in this type of work, which by investigating a number of mechanisms with far-reaching consequences actually investigates the whole system. By its very nature, this type of work has to confine itself to offering promising directions and avenues for future research rather than offering fully worked out, comprehensive analyses of the phenomena under investigation. Therefore, the paper should be judged not by what it has conclusively shown, but by how successful it is in providing promising new directions for future research.

Appendix: More on successive cyclic movement

It is worth noting at this point that several of the arguments given in Bošković (2002a) and Boeckx (2003) for the empirical superiority of a Takahashi (1994)-style analysis over Chomsky's (1995, 1999, 2000) feature-checking-in-intermediate-positions locality system 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 two of the Bošković/Boeckx arguments, showing how the relevant data can be handled in the current system.

One of Bošković's (2002a) arguments involves the paradigm in (65)-(66), which illustrates the impossibility of intermediate preposition (P) stranding. (I indicate only the original traces in (65)-(66).)

- (65) 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]?
 (66) *[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 (66), more precisely, the contrast between (65)b and (66). It seems that (66) is incorrectly ruled in.⁶⁷ On the other hand, accounting for these data under Takahashi's 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 (65) would take 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 (65)a and NP in (65)b) and finishing in the matrix SpecCP would then be 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 (65), (66) 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 (65)b and (66) is thus accounted for under the MCLP analysis.⁶⁸

⁶⁷Note 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 (66), both of which involve extraction of a complement of P from SpecCP.

⁶⁸Afrikaans actually appears to allow constructions like (66), with V-2 in the embedded clause (see du Plessis 1977). Recall, however, that the MCLP analysis leaves open the possibility that some languages involve feature checking in intermediate positions (i.e. for these languages, these are really not intermediate positions). It is then possible that in Afrikaans, Spec of a declarative (V-2) C is a true feature-checking position, in contrast to English. On the other hand, it is difficult to account for the contrast between Afrikaans and English on the feature-checking analysis, on which the Spec of the declarative C can be (in fact must be in the relevant configuration) a feature-checking position in both languages. Notice that under the analysis to be presented below, Afrikaans can be handled if the PP that moves to the Spec of the declarative (V-2) C is specified for the feature that is checked by such a C in

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 (66) raised for Chomsky's analysis would also arise under the current analysis. Before showing how the data in (65)-(66) can be accounted for in the current system, let me note that, as pointed out by Cedric Boeckx (p.c.), the Form Chain account of (66) does face a problem in that it seems to incorrectly rule out (67), where (under Sportiche's account of quantifier float) quantifier float breaks chain formation in an intermediate position, which, according to Bošković (2002a), does not involve feature checking (see also section 2). Yet, in contrast to the stranding of the preposition in (66), stranding of the quantifier in (67) is possible. (See Bošković 2002a for a suggestion of how to handle (67) under the MCLP analysis. Under the current analysis accounting for it is straightforward.)

(67) The students seem all to know French.

Returning to (65)-(66), 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 (65)a), or in its complement NP, in which case the NP would have to move alone, stranding the P (as in (65)b), given the preference to carry as little material as possible under movement (see Chomsky 1995, Stateva 2002, Bošković 2004a). Turning to (66), 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 (66) 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 (66)).

Consider now Boeckx's (2003) argument for the MCLP analysis based on constructions like

Afrikaans, while the NP complement of the P in question is specified with the uK feature involved in wh-movement.

(68) (see also Collins's 1994 original discussion of chain interleaving).

(68) ??Who did you say that [pictures of t] were stolen?

(Collins 1994)

In light of Legate's arguments that successive cyclic movement targets passive VPs, which in Chomsky's phase system should be interpreted as indicating that they are phases (see Legate 2003), consider the following derivation: *Who* moves out of [pictures of *who*] while the latter is in its θ -position. The movement would target the Spec of the passive VP phase. Then [pictures of *t*] moves to SpecIP via the Spec of the passive VP phase. Finally, *who* moves to SpecCP. Boeckx (2003) observes that if intermediate steps of movement involve feature checking, it is not clear how the derivation can be ruled out. (Notice that the derivation involves movement of *who* out of an object rather than a subject, hence does not involve a subject condition configuration.) On the other hand, ruling it out in Takahashi's MCLP/Form Chain system is straightforward. Given that Form Chain is a single operation, formation of a chain cannot be interleaved with another operation (see Collins 1994 and Boeckx 2004). This means that the intermediate movement of *who* in the derivation in question must involve a separate chain. However, since, by hypothesis, there is no feature checking in intermediate positions, the derivation in question is then ruled out by the Last Resort Condition. Since in the current system movement of *who* to the edge of the passive VP would have motivation (although it would not involve feature checking), the Last Resort problem that arose under Chomsky's analysis also seems to arise under the current analysis. How can it be handled? Consider the following structure that (68) has prior to any relevant movement, with XP being whatever phase is involved in passive VPs.

(69) were [_{XP} stolen [pictures of *who*]]

uK uJ

Recall that under the current analysis, which deduces generalized EPP effects from the Activation Condition (which is itself also deduced), any element that undergoes overt movement must have an uninterpretable feature (which means both *pictures of who* and *who* in (69)), movement to the Spec

of phase heads being driven by the need of the element in question to avoid being sent to Spell-Out. Under this analysis both elements that contain a *u* feature in (69) must move to SpecXP. In the derivation considered above, this was achieved by moving *who* and [*pictures of t*] separately to different SpecXPs. But there is another derivation on which the whole object *pictures of who* moves to SpecXP. The derivation achieves the same goal of removing both *uK* and *uJ* from the spell-out domain. The derivation in question is intuitively more economical than the two-movements-to-SpecXP derivation since the latter derivation involves two movements to SpecXP, creating two Specifiers of XP. I therefore suggest that the single-movement-to-SpecXP derivation blocks the two-movements-to-SpecXP derivation.

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