Agree, Phases, and Intervention Effects*

Željko Bošković

University of Connecticut

0. Introduction

The goal of this paper is to investigate some differences in the locality of Move and Agree with respect to phases/the Phase-Impenetrability Condition (PIC) and intervention effects. It will be argued that, in contrast to Move, Agree is not subject to the PIC.[1] However, the difference in the locality of Move and Agree will not be stipulated–it will be shown to follow from independently motivated assumptions regarding the syntax-phonology interface. Given that Agree is not subject to the PIC we would expect Agree to be less local than Move, which is subject to the PIC. While there are a number of cases where Agree appears to be less local than Move, which can be captured if Move is, and Agree is not, subject to the PIC, we will also see that there are cases where Agree appears to be more local than Move. I will argue that the culprit for this is relativized minimality, i.e. intervention effects, which are "stronger" with Agree than with Move. The reason for this is that with Move, successive cyclic movement makes possible skipping of potential interveners, which do affect Agree.

The paper is organized as follows. In section 1 I go through a number of empirical arguments that Agree is not subject to the PIC. Section 2 gives a theoretical explanation for this state of affairs, developing a particular approach to linearization. Section 3 discusses some cases that appear to be incorrectly ruled in if Agree is not subject to the PIC. I show that such cases are in fact ruled out via Relativized Minimality, i.e. as cases of intervention effects. Section 4 is the conclusion.

1. Agree is not subject to the PIC

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[1]The claim is also made in Lee (2003) and Stjepanović and Takahashi (2001). I will summarize below some of Stjepanović and Takahashi's arguments that Agree is not subject to the PIC, adding a number of new arguments to this effect.

Chomsky (1999, 2000) argues that phases are involved in a number of phenomena, for example, successive cyclic movement and Multiple Spell-Out. When it comes to the former, the notion of *phase* is similar to the pre-minimalist notion of *bounding node*. The basic idea here 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 Y contained in the complement of the phase head X is not accessible outside of XP. In other words, the effect of the PIC on Move is that only the head and the Spec of a phase are accessible for movement to a position outside of the phase. In the multiple Spell-Out approach (see Epstein 1999 and Uriagereka 1999), in which syntax sends pieces of structure to the phonology throughout the derivation, phases are also taken to determine which chunks of syntactic structure are shipped to Spell-Out. There are a number of other mechanisms and phenomena where phases have been assumed to be involved. Since they are not relevant to our concerns, I simply refer the reader to Chomsky (1999, 2000) for relevant discussion.

This section will focus on locality and the PIC. Chomsky argues that the PIC constrains both Move and Agree. In other words, given the PIC, in a configuration like (1), where XP and ZP are phases, Y is "invisible" to X for either Move or Agree.[2]

(1) $[_{XP}$ X $[_{ZP}$ [Z Y

I will take it for granted here that Move is subject to the PIC. Given that, as argued by Chomsky, CPs are phases, all the usual diagnostics that wh-movement proceeds with Specifiers of intermediate CPs provide evidence to this effect. The goal of this section is to show that Agree is not subject to the PIC, i.e. that as long as there are no other intervening factors (like intervention effects, see section 2), X and Y can undergo Agree in a configuration like (1). Before proceeding, a note is in order concerning what I consider phasal nodes to be. Recall that phases are involved in a number of phenomena, including successive cyclic movement and multiple spell-out. Chomsky (1999, 2000, 2001) considers only certain phrasal boundaries to be phases, which means that only certain phrases are targeted by successive cyclic movement and sent derivationally to the phonology. On the other hand, a number of works have argued that successive cyclic movement targets every maximal

[2]There are some differences in the approach to the PIC taken in Chomsky (1999) and Chomsky (2000), which will not be relevant until section 1.5 (see footnote 24).

projection on its way (see Bošković 2002a, Boeckx 2003a, Manzini 1994, Müller 2004, Takahashi 1994; Fox and Lasnik 2003 come close to reaching the same conclusion, and Chomsky in press also hints at it),and that every phrase is sent to spell-out (see Epstein and Seely 2002). Adopting this into a phase-based system would lead to the conclusion that every phrase is a phase.[3] Under the every-phrase-is-a-phase approach, it would be rather easy to argue that Agree is not subject to the PIC, since any Agree relation with or into a complement across any phrasal boundary would violate the PIC. To make the task at hand more difficult, in what follows I will therefore be adopting Chomsky's approach to phases, where only certain phrases, in particular CP and vP (i.e. traditional VP with an external theta-role), are considered phases, rather than the every-phrase-is-a-phase approach.[4]

1.1. Agree into finite clauses

A number of languages allow Agree dependencies that clearly violate the PIC. This is for example the case with languages that allow agreement to reach into a finite CP.[5] One such language is Chukchee, as shown by the following example noted in Inènlikèj and Nedjalkov (1973), also discussed in Mel'čuk (1988:301), Ura (1994), and Stjepanović and Takahashi (2001). (The last work discusses the data in the same context as I do here.)[6]

[3]This may be 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 phases (in this respect, see Epstein and Seely 1999, 2006, Bošković 2002a, and Boeckx and Grohmann in press for problems for Chomsky's way of making CP and *v*P special).

[4]Even under Chomsky's approach, where only certain phrases are taken to be phases, it has been argued that we cannot take only CPs and *v*Ps to be phases. Thus, Legate (2003) shows that successive cyclic movement targets the edge of passive and ergative VPs, which she then argues should be considered phases (she also provides an argument based on multiple spell-out). This will become relevant only in section 1.2.

[5]The discussion in this section is not completely conclusive since, due to the inaccessibility of the relevant data, I wasn't able to run all the necessary tests.

[6]The English translation, which corresponds to Inènlikèj and Nedjalkov's (1973) Russian translation, is provided by Mel'čuk (1988).

(2) ənan qəlɣiļu ləŋərkə-nin-et [iŋqun Ø-rətəmŋəv-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 (2), an Agree relation that violates the PIC. (2) then provides evidence that the PIC does not constrain Agree, which is what Stjepanović and Takahashi (2001) also conclude regarding the example in question. Note that Alutor, a closely related language, behaves like Chukchee in the relevant respect (see Mel'čuk 1988).[7]

Several Algonquian languages also allow agreement to reach into a finite clause. Below I give examples from Blackfoot, noted in Frantz (1978). (See also Legate 2005 for a recent discussion. Note that we are dealing here with finite clauses. Some irrelevant details are omitted from the glosses.[8])

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

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

(5) nít-ssksinoa-**wa** **m**-aníst-sskonata'psspi.
1-know-3 3-manner-strong
'I know how strong he is.'

[7]Agreement with the embedded clause subject is also possible at least in Alutor. In light of this I leave open why the null subject of the embedded clause in (2) does not interfere with the agreement relation in question. (Notice also that I will argue in section 3 (see especially footnote 48) that intervening verbs that are not in the same minimal domain as the agreeing NP induce a blocking effect with respect to *v*-NP agreement. Given this, we would not expect to find the type of object agreement under consideration with an NP that is embedded several clauses away from the relevant *v*, since the intervening verbs would be inducing a blocking effect. The reader should also bear this in mind during the discussion of Tsez below.)

[8]Polinsky (2003) proposes a prolepsis analysis for the Blackfoot construction under consideration. There are, however, serious problems with this analysis (see Branigan and MacKenzie 2002, Frantz 1978, and Legate 2005), so I will not adopt it here.

The agreement affix on the verb and the element it agrees with are given in bold in (3), (4), and (5). Like the Agree relation in (2), the Agree relations in (3)-(5) violate the PIC (see also section 1.5., where it is argued that coordinated phrases are phases). Notice also that (4) involves first conjunct agreement, i.e. the *v* agrees with the first conjunct of a coordinated NP. This would prevent giving Blackfoot the kind of analysis proposed by Ura (1994) for Alutor and Chukchee, on which the agreeing element (subject or object) undergoes covert movement to the matrix SpecAgroP.[9] It is also worth noting that while the embedded clauses in (3)-(4) are declaratives, the embedded clause in (5) is a question. The example involves long-distance agreement reaching into an indirect question, i.e. the agreement is with the subject of an embedded question.

What about languages that do not allow agreement to reach into a finite clause? Note that what is important for our purposes is that there are languages that allow such agreement, which means that such agreement should in principle be allowed. If Agree were constrained by the PIC, no language would allow examples like (2). Languages like Chukchee and Blackfoot thus provide evidence that Agree is not subject to the PIC. There must then be an additional mechanism to block agreement into finite clauses in languages that disallow it. I speculate here that in languages that disallow it finite clauses have ϕ-features, hence count as candidates for an agreement relation with *v*. In this respect, it is worth noting here that McCloskey (1991) provides strong evidence that finite CPs have ϕ-features even in English based on examples like (6):

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

Notice now that given the above suggestion and Agree Closest, the CP is the closest candidate for agreement with *v* in the configuration in (7), preventing *v* from undergoing Agree with the NP (see also Boeckx 2003a).[10]

[9]Full agreement with embedded subjects is also possible. Notice also that, in addition to providing evidence that Agree is not subject to the PIC, examples like Blackfoot (3)-(4) also provide evidence that Agree is not subject to the Activation Condition, i.e. an NP does not have to have an unchecked Case feature to be able to undergo agreement. I argue that Agree is indeed not subject to the Activation Condition on independent grounds in Bošković (2005) (Bhatt 2005 makes the same claim).

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

(7) v [$_{CP(finite)}$ [$_{IP}$ NP

It is implied under this analysis that the embedded CP in (2)-(5) has the option of not bearing ϕ-features. (It is important to notice that Chukchee and Blackfoot CPs would not always have to be ϕ-featureless; this only needs to be an option.[11]) The above account of crosslinguistic variation with respect to the availability of agreement into finite CPs is, of course, rather speculative. I leave a more detailed exploration of it for future research. Note, however, that under the Agree Closest analysis, it is quite straightforward to tie the crosslinguistic difference to lexical properties such as the feature make-up of a particular lexical item, given that, in contrast to the PIC, Agree Closest is feature sensitive.

It is also worth noting here that what I have argued above with respect to (7) (for languages where agreement into CPs is disallowed) is that a non-local Agree relation that does not conform with the PIC is ruled out independently of the PIC because it violates Agree Closest. In section 3 I will give several additional examples of this type, which will also illustrate redundancy between Agree Closest and the PIC. In this respect, notice that Chomsky (in press) also observes that when it comes to Agree, there is a great deal of redundancy between the PIC and intervention effects, i.e. Agree Closest, which may be taken as another argument in favor of not subjecting Agree to the PIC.

I now turn to another language that allows long-distance agreement for which an alternative analysis has been proposed. The language in question is Tsez. Example (8), taken from Polinsky and Potsdam (2001) (P&P), illustrates long-distance agreement in Tsez. (Note that P&P show that the agreeing NP in long-distance agreement examples like (8) must be absolutive. More precisely, verbs show agreement only with absolutive arguments. All the Tsez data below are taken from P&P, with irrelevant details omitted from the glosses.)

Bošković 1995 also addresses standard arguments for the topicalization analysis of subject clauses). Consider (i-ii).

(i) *To John, that book, Mary gave.
(ii) To me, that John likes Mary seems obvious.

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

[11]In other words, Chukchee and Blackfoot CPs could have ϕ-features in other contexts, but this option should be unavailable in long-distance agreement cases.

(8) eni-r [už-ā **magalu** bāc'ruɬi] **b**-iyxo.
mother-dat boy-erg bread.**III**.abs ate **III**-know
'The mother knows the boy ate the bread.'

P&P argue that when agreement across a finite clause boundary takes place in Tsez, the object NP that agrees with the higher verb is located in the edge of the embedded clause, i.e. in the embedded clause SpecCP (I am slightly simplifying their analysis), which means the Agree relation in question does not violate the PIC. (Note also that it would not be blocked by Agree Closest even if the CP in question has ϕ-features, if the CP and SpecCP are equidistant from *v*.) However, P&P are forced to argue the movement that brings the agreeing NP to the edge of the embedded clause in examples like (8) is LF movement since the relevant NP is clearly not located in the edge of that clause in overt syntax. More precisely, they argue that the movement in question is LF topicalization.[12] There are, however, several problems with their analysis. (For additional arguments against P&P's analysis and an alternative account, see Chandra in press.) First, apart from being covert, what they call topicalization in Tsez differs in a number of respects from topicalization in English. The claim that Tsez has LF topicalization, in addition to overt topicalization, is also problematic. I am in fact not aware of any other claim to this effect (independent of long-distance agreement) for any other language, which may indicate that LF topicalization, which is crucial to P&P's account of Tsez, does not exist. (In fact, in a system like Vallduví 1992 we would expect topicalization to be limited to overt syntax–LF topicalization should not exist.) At the very least, given the highly controversial nature of LF topicalization, we would need to see strong independent evidence (independent of P&P's analysis of agreement) that topicalization in Tsez can be covert. According to P&P, both elements with overt topic markers (overtly-marked topics) and elements without overt topic markers (non-topic marked topics) may undergo LF topicalization in Tsez. (Under P&P's analysis, if there is more then one such element in a sentence, only one of them undergoes covert topicalization.) P&P do offer one not particularly strong argument that elements that bear overt topic markers in Tsez

[12]Branigan and MacKenzie (2002) propose a similar topicalization analysis for Innu-aimûn, which has a curious property in that the relevant topicalization operation in the embedded clause is driven by a higher verb, and Bruening (2001) proposes a similar analysis for Passamaquoddy. Notice that P&P also provide an analysis in terms of government, which I am putting aside here. (I.e., P&P show that the relevant facts can be captured either by assuming government or Agree augmented with the PIC. I will discuss only the latter analysis here.)

undergo covert topicalization.[13] Recall, however, that it is crucial for P&P's analysis that even elements that do not bear overt topic markers undergo covert topicalization in Tsez. Thus, *magalu* in (8) must undergo covert topicalization. However, P&P do not offer any independent evidence that non-topic marked elements undergo covert topicalization. In fact, as P&P themselves note, there is pretty strong evidence that they do not. Thus, on. p. 639 (footnote 21) they give a context in which long-distance agreement is impossible although a non-overtly topic marked "topic-in-situ" should be able to undergo LF topicalization, becoming accessible for long-distance agreement. The context in question involves a higher non-topic marked element undergoing long-distance agreement and a lower topic-marked element (more precisely, a topic-marked NP that is not higher than the agreeing NP). Under P&P's analysis, the higher non-topic marked element should undergo LF topicalization, becoming eligible for long-distance agreement.

(9) *C [non-topic marked NP] [topic-marked NP]

The data in question can be naturally interpreted as indicating that while topic-marked topics may enter into a covert topic dependency (which does not necessarily involve movement, see below), non-topic marked elements in Tsez do not do that. Before turning to an alternative analysis of Tsez which is based on this conclusion, it is worth noting that P&P's analysis of Tsez is designed to disallow long-distance agreement across an overt complementizer and into an embedded question. As a result, it does not extend to Chukchee (cf. (2)) and Blackfoot (cf. (5)).

I now turn to an alternative analysis of Tsez. P&P show that there are several contexts in which long-distance agreement with a non-topic marked element like *magalu* in (8) is blocked. The contexts where such agreement is blocked are summarized in (10), and the data illustrating (10) are given in (11), which should be compared with (8). (According to P&P, wh-phrases and overtly marked topics can either undergo overt wh-movement/overt topicalization or stay in situ. Although I did not illustrate both cases in (11), according to P&P both fronted and in-situ wh-phrases and topic-marked elements block long-distance agreement.)

[13]The argument concerns sensitivity of putative covert topicalization to locality restrictions on movement. The only example they give involves the Coordinate Structure Constraint. However, the example may be ruled out independently due to a violation of the coordination-of-likes requirement. (The example involves coordination of two NPs, only one of which is topic-marked.)

(10) a. when the embedded clause is introduced by an overt complementizer.

b. when the embedded clause is a question, i.e. when it contains a wh-phrase that is interpreted in that clause. The wh-clause can be either fronted or in-situ.

c. when the embedded clause contains a topic-marked element. The topic-marked element can be either in-situ or fronted.

(11) a. *eni-r [už-ā **magalu** bac'si-ƛin] **b**-iyxo.
mother-DAT boy-ERG bread.**III**.ABS ate-**COMP** **III**-know
'The mother knows that the boy ate bread.'

b. *eni-r [nā c'ohor-ā **micxir** bok' āk'ruɬi] **b**-iyxo.
mother-DAT where thief-ERG money.**III**.ABS stole **III**-know
'The mother knows where the thief stole the money.'

c. *eni-r [aħ-ā čanaqan-go-gon **ziya** bišrerxosiɬi] **b**-iyxo.
mother-DAT shepherd-ERG hunter-POSS.ESS-TOP cow.**III**.ABS fed-CAUS **III**-know
'The mother knows that the hunter, the shepherd made (him) feed the cow.'

Let us assume with Bošković (1997) that not all finite clauses have to be CPs; they can also be bare IPs.[14] As discussed in Bošković (1997), in certain contexts they have to be CPs since the CP is independently required. Notice now that the contexts summarized in (10) are precisely the cases where we do have independent evidence for the presence of a CP, i.e. the CP is independently required. This is obvious in the case of (10)a. The same holds for (10)b: As discussed in Bošković (1997), embedded questions must be CPs headed by a +wh C; otherwise they cannot be interpreted as questions. I assume that a wh-phrase in a wh-question either moves to SpecCP or stays in situ, undergoing Agree with the C. Finally, assuming that Topicalization involves movement to SpecCP,[15] the context in (10)c also must involve a CP: Parallel to (10)b, a topic-marked element either moves overtly to SpecCP or stays in situ, undergoing agree with the topic CP head. In the good example

[14]Note 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 a recent discussion), I will interchangably use I, T, and Agr.

[15]If topicalization structures must involve CP recursion (see, for example, Authier 1992, Iatridou and Kroch 1992, and Watanabe 1993), there would actually be two CPs, with the lower CP establishing a relation with a topic-marked element.

of long-distance agreement illustrated in (8), on the other hand, we have no independent evidence for the presence of a CP projection in the embedded clause, hence I suggest that the embedded clause is an IP, following the line of reasoning laid down in Bošković (1997).

It is also worth noting that Bošković (1997) actually does not exclude the possibility that some declarative clauses without an overt complementizer are CPs. Given the discussion in Bošković and Lasnik (2003) and An (in press), one of the relevant tests for the categorial status of clauses concerns their mobility. More precisely, CPs headed by a null C whose Spec position is not overtly filled (or a null C that does not undergo agreement) are generally immobile. In this respect, notice that Tsez finite clauses that are transparent to agreement are mobile, which suggests that they are indeed IPs. (Note that the clause containing the long-distance agreeing element is dislocated to the right periphery in (12)a, and to the left periphery in (12)b).

(12) a. enir **b**-iyxo [užā **magalu** bāc'ruɬi]
mother **III**-know boy bread.**III** ate
'The mother knows the boy ate the bread.'

b. [užā **magalu** bāc'ruɬi] enir **b**-iyxo.
boy bread.**III** ate mother **III**-know
'The mother knows the boy ate the bread.'

Here's where we are then: CPs block long-distance agreement in Tsez, and IPs do not. This state of affairs can be easily captured without assuming LF topicalization of non-topic-marked elements like *magalu* in (8). We could appeal to the PIC to capture it: Assuming that CP clauses are, and IP clauses are not, phases, *v* could agree with an NP in the complement of I, but not in the complement of C, given the PIC. However, although the Tsez data themselves could be accounted for in this manner, if we appeal to the PIC we incorrectly rule out long-distance agreement in Chukchee examples like (2) and Blackfoot examples like (5), where the embedded clause is clearly a CP. Alternatively, we can simply appeal to Agree Closest. Recall that I have suggested above that in languages that disallow Agree into CPs, such agreement is blocked via Agree Closest: the CP has ϕ-features and is closer to the agreement target head than an NP embedded within the CP, hence the CP blocks agreement with the NP via Agree Closest. What we have seen above is that, contrary to

appearances, Tsez is actually a language that does not allow agreement into finite CPs. We can then simply apply the Agree Closest analysis to Tsez, assuming that Tsez and Chukchee/Blackfoot differ in the ϕ-specification of their CPs, along the lines discussed above.[16]

There is actually one construction in which Tsez allows long-distance agreement into a CP–such agreement is allowed with an NP located in the edge of the embedded clause in overt syntax (note that the wh-phrase in (13) would be D-linked, see in this respect footnote 18).

(13) eni-r [**šebi** yāk'iruɬi] **y**-iyx-ānu.
mother-DAT wh.**II**.ABS left **II**-know-neg
'The mother does not know who [of women] left.'

This is not surprising. Assuming that XP and SpecXP are equidistant from a position outside of XP, the CP and the element located in its Spec are equidistant from *v*, hence the element in SpecCP can undergo agreement with *v* without violating Agree Closest.[17]

Returning now to long-distance agreement cases in examples like (8), there are several

[16]Tsez IPs would not have ϕ-specification, which means that they would be less nominal than CPs (see in this respect, Bošković 1995). Alternatively, we can simply adopt the standard assumption that the ϕ-features of I are checked off by the subject of the clause. (Recall that in Bošković 1997 I do not exclude the possibility that some declarative clauses without overt complementizers are CPs. What the data discussed above show and what is sufficient for the current analysis to go through is that such clauses can be IPs in Tsez–nothing actually rules out the possibility that they can also be CPs. Notice now that long-distance agreement in constructions like (8) is actually optional; instead of *magalu*, the verb can agree with the complement clause. One way of capturing the optionality on which the optionality would be reduced to different lexical choices (i.e. there would be nothing optional about it in the syntax itself) would be to assume that a CP projection can be, but does not have to be, present in finite clauses without overt complementizers in Tsez. When the clause in question is a CP, the verb would agree with the clause, and when the clause is an IP, the verb would agree with *magalu*.)

Note also that although (5) provides evidence that, in contrast to Tsez, Blackfoot allows agreement into CPs, (3)-(4) could in principle involve agreement into an IP, since the embedded clauses in these example could be IPs.

[17]Notice that we may need to find an independent way of blocking agreement with SpecCP in English because of constructions like (i) (see Bošković 1997 for discussion of such examples).

(i) a. *I know what Mary remarked.
b. *I know who Mary conjectured to know French.

As discussed in Bošković (1997), *remark* and conjecture are Caseless verbs (cf. *John remarked that Peter left/*something* and *John conjectured that Peter left/*something*). However, since *know* is able to check accusative Case, a question arises why it is apparently unable to Case-check *what/who* in (i). Even if CP has a blocking affect on Agree in English (via Agree Closest), *what*/*who* and the embedded CP should be equidistant in (i). We may thus need to find an independent way of blocking Agree into English CPs (independent of the PIC and Agree Closest; the PIC clearly cannot rule out (i), and Agree Closest cannot either, assuming equidistance.)

reasons why the current analysis of such constructions should be favored to P&P's analysis. First, the current analysis accounts for the fact that topic-marked elements block long-distance agreement with non-topic marked elements regardless of whether they are higher or lower than non-topic marked elements attempting to undergo such agreement. Second, under the current analysis non-topic marked elements do not undergo LF topicalization, or in fact any kind of topic-dependency in Tsez so that we can limit topic dependencies to topic-marked elements.[18] Moreover, while topic-marked elements do enter into a formal dependency with a topic head under the current analysis, we do not need to posit LF topicalization: topic-marked elements either undergo overt topicalization, or an Agree relation with a topic head. This has two desirable consequences. First, recall that LF topicalization may not exist at all. Second, there is quite a bit of controversy regarding how traditional LF movement should be treated in the recent literature. Chomsky (1995) proposes replacing traditional LF movement with Move F. Chomsky (1999, 2000), on the other hand, proposes that it should be replaced by Agree. Yet another approach is to treat traditional LF movement in terms of pronunciation of lower copies. In this system, traditional overt movement would involve pronunciation of the higher copy, and traditional LF movement pronunciation of the lower copy (see, for example, Bobaljik 1995, 2002, Groat and O'Neil 1996 and Pesetsky 1998). Finally, Nissenbaum (2000) (see also Chomsky 2001) suggests that both overt and covert dependencies involve movement, but differ in the timing of the transfer of its result to Spell-Out. We can, of course, also simply keep traditional LF movement, which requires a two-cycle syntax (i.e. the LF component), which the Agree approach, the pronunciation-of-a-lower-copy approach, and the-timing-of-transfer approach do not require. The important point to notice is that we are dealing here with alternative formulations of the same phenomenon. We do not want to have all of

[18]P&P note that the agreeing element is interpreted as a topic even in examples like (8). I don't think that this necessarily requires it to undergo topicalization. Thus, elements undergoing object shift in Icelandic are known to have roughly a topic interpretation, but they are standardly assumed not to undergo topicalization. (So, focalized elements cannot undergo object shift in Icelandic, just like they cannot trigger the Tsez agreement operation under consideration.) Some elements triggering participle agreement in French also must receive a topic-like interpretation (see Obenauer 1994, Déprez 1998, and Boeckx 2003a), although the process in question clearly does not involve topicalization. (This means that there needs to be a way of imposing topicality on elements undergoing certain agreement processes that is independent of the movement operation of topicalization.) Similar topic-like interpretations are associated with resumptive pronoun and clitic doubling constructions (see Boeckx 2003a and references therein; Boeckx relates this to D-linking questions). The reader is also referred to Dalrymple and Nikolaeva (2005) (some of their cases involve agreement) and Diesing (1992) for a number of constructions which are characterized by a topic-like interpretation, although they do not involve topicalization. In fact, what P&P refer to as topic interpretation (of non-topic marked agreeing elements) may actually be the kind of interpretation associated with (some of) the above-mentioned processes/constructions.

the above-mentioned mechanisms, since that would considerably increase the power of the theory.[19] Under the analysis proposed here we can indeed stick to one of the above mechanisms, which is not the case under P&P's analysis.

In short, then, the P&P analysis faces a theoretical problem: it requires both Agree and traditional LF movement. However, Agree was originally proposed to replace traditional LF movement. The best theory would have only Agree, not Agree and LF movement. The current analysis in fact relies only on Agree.[20]

1.2. Agreement in existential constructions

Returning now to the claim that Agree is PIC-free, existential constructions in English provide additional evidence to this effect. Legate (2003) provides a number of empirical arguments that passive and ergative VPs should be considered phases, just like active and non-ergative VPs. As pointed out by McGinnis (2004), Nevins (2004) and Legate (2005), given this claim, examples like (14), where there is an Agree dependency between the indefinite NP (the goal) and the matrix I (the probe), provide evidence that Agree is not subject to the PIC since two phases (given in bold) separate the probe and the goal.

(14) [$_{IP}$ There I [$_{\mathbf{VP}}$ seem to have [$_{\mathbf{VP}}$ arrived two generals]]]

1.3 LF anaphor movement

Chomsky (1986) proposes the LF anaphor movement hypothesis, on which the anaphor in (15) undergoes LF movement to the matrix I, which agrees with the antecedent of the anaphor.[21]

[19]This is the standard position. Pesetsky (2000) suggests on empirical grounds that we do need to combine some of the above strategies (more precisely, he keeps Move F and covert phrasal movement). It is clear that theoretically, it would be best to settle on only one of the above mechanisms, which also seems to be the standard position. It of course remains to be seen what that mechanism should be and how the data discussed by Pesetsky can be captured.

[20]The reader should in fact bear in mind during the discussion below that I treat traditional LF movement dependencies as Agree relations.

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

(15) John believes himself to be smart.

The hypothesis has often been appealed to in the Minimalist Framework, its precise implementation depending on the approach to covert dependencies at the time (see, for example, Chomsky 1993, 1995, in press, Lasnik 1999, and Reuland 2001). In the Agree-based framework, which is adopted in this paper, LF anaphor movement is implemented as an Agree relation between I and the anaphor (see Chomsky in press for such an Agree analysis). In light of this, consider (16).

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

Under the Agree implementation of the LF anaphor movement hypothesis, there is an Agree relation between the matrix I and the anaphor in (16). The relation clearly violates the PIC (intervening phases are given in bold), thus providing additional evidence that Agree is not subject to it.

1.4. 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.[22] The relevant configuration is illustrated in (17).

(17) T $[_{\mathbf{vP}}$ $[_{\mathbf{CP}}$ $[_{IP}$ 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 (17) is to dispense with the assumption that Agree is subject to the PIC–the intervening phasal boundaries in (17) then do not matter.[23]

[22]Under Landau's analysis, T also agrees with its subject, so that the subject and PRO indirectly end up agreeing with each other.

[23]Note 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.

1.5. First conjunct agreement

In this section I will argue that the paradigm in (18)-(22) concerning first conjunct agreement in existential constructions in English, discussed in Munn (1993), Sobin (1994, 1997), Bošković (1997), and Schütze (1999), 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. Note that the judgments in (18)-(22) are based on Sobin's 1994 experimental data, with some idealization.)[24]

(18) There is a woman and five men in the garden.
(19) *There are a woman and five men in the garden.
(20) *A woman is and five men in the garden.
(21) A woman and five men are in the garden.
(22) *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

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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).

[24]As noted above, Chomsky (2000) and Chomsky (1999) give slightly different definitions of the PIC. The arguments given so far hold regardless of whether Chomsky's (2000) or Chomsky's (1999) approach to the PIC is adopted. The argument given in this section does depend on adopting Chomsky's (2000) approach (if we do not adopt Legate's 2003 claim that non-active VPs are also phases). The relevant definition is given in (i), where 'edge' is a Spec.

(i) 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)

The approach to the PIC adopted in Chomsky (2000) is simpler than the one adopted in Chomsky (1999). (Note that Chomsky 2000 antecedes Chomsky 1999.) Chomsky (1999) introduces a complication into the definition of the PIC in order to exempt Agree from PIC effects in certain configurations, which essentially hid a locality distinction between Move and Agree. Instead of complicating the relevant definitions of phases and the accompanying machinery in order to sneak in a locality difference between Agree and Move, 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. Nevertheless, the reader should bear in mind that the arguments given in sections 1.1.-1.4. hold regardless of whether Chomsky's (2000) or Chomsky's (1999) approach to the PIC is adopted. The argument given in this section does depend on adopting the simpler approach put forward in Chomsky (2000) if we do not adopt Legate's (2003) claim that non-active VPs are also phases. If Legate's claim is adopted, the argument about to be given would also be compatible with Chomsky's (1999) approach to phases.

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 2004c for 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, 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 C&P. (As noted above, Abney 1987 and Bošković 2004c treat NPs and PPs in the same way as clauses. What I am suggesting here is to treat BPs like clauses too.)

This gives us the structure in (23) for the coordinated NP in (18) and (20). (I give the structure before *there*-insertion/movement of the indefinite.)

(23) T-is $[_{C\&P}$ C& $[_{Agr\&P}$ $[_{NP1}$ 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 C&P, is a phase, and C& cannot have a Spec.[25] This gives us a straightforward account of the ungrammaticality of (20): since C&P is a phase and C& cannot have a Spec, *a woman* cannot move to SpecIP from SpecAgr&P without violating the PIC. What about (18) then? While movement of the first conjunct (i.e. movement out of C&P) is impossible, agreement with the first conjunct (i.e. Agree into C&P) is possible. This immediately follows under the current analysis given that phases and the PIC are irrelevant to Agree. We thus

[25]This 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 C&P phasehood and the inability of C& 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.) The line of research I am pursuing in work in preparation is that the head of the extended projection of B is actually not formally unable to have a Spec, but filling its Spec position ultimately leads to a semantic problem.

have an account of the different behavior of the first conjunct with respect to Move and Agree.[26]

To summarize, I have suggested that the CSC is a PIC-type effect, and argued that the reason why, in contrast to Move, 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. The reader should also bear in mind that quite independently of the current analysis, (18)-(22) provide evidence that Move and Agree are subject to different locality restrictions, which is what I am arguing for here.

The paradigm in (18)-(22) 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 (21)-(22) does not take place before movement (if that were the case, (22) should be acceptable, and (21) unacceptable, on a par with (18)-(19)), 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 2002). Under this analysis, in (18)-(19) the agreement would take place at a distance, through Agree. In (21)-(22), 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 C&P apparently cannot be targeted for Agree (if this were possible, (19), which Sobin's 1994 experimental data indicate is unacceptable, should be acceptable), although the C&P apparently can undergo agreement in the Spec-head configuration (cf. (21)). I offer here a speculation regarding the impossibility of targeting C&P with Agree. Suppose that targeting NP1 (which is higher than NP2) is more economical than targeting the whole C&P, as a result of which Agree with NP1 (cf. (18)) is preferred to Agree with the whole C&P (cf. (19)). Regarding Move, since, as discussed above, extracting NP1 alone is not an option, the whole C&P 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 C&P 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 (23) be preferred to Agree

[26]Note also that Agree Closest favors agreement with NP1 to agreement with NP2 or any NP that would be embedded within NP1 or NP2.

with the whole C&P? The question may be related to the issue of how the ϕ-features of the conjuncts (NP1 and NP2) are combined at the C&P level. Apparently, the individual conjuncts somehow pass up their ϕ-features to the C&P, 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 agreement takes place with NP1 rather than the whole C&P. Since the latter, but not the former, requires Y, agreement with NP1 would then be less costly than agreement with the C&P.[27]

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. Under the probe-goal analysis we 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 (21) over (22).[28] What about (18)-(19)? 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 (1997), 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 (probing both of them), which by transitivity end up agreeing with each other. In Lasnik (1995) and Bošković (1997), agreement between the expletive and the associate was established via a version of the expletive replacement hypothesis (more precisely, the adjunction version of the hypothesis, see Chomsky 1991). On the other hand, under the analysis presented in Bošković (2005), who follows Chomsky (1995) in assuming that *there* and its associate belong to the same DP (see also

[27]There is an issue of the cycle under this analysis: Y would apparently take place in (21), since agreement with the whole C&P 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 C&P), given that adjunction can be acyclic (see Lebeaux 1988, Chomsky 1993, Fox 2000, Nissenbaum 2000, Stepanov 2001, and Bošković 2004a, among many others).

[28]Note 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.

Frampton 1997, Hornstein and Witkoś 2003 and Sabel 2000), the expletive being the DP layer and the associate the NP part, the two agree because they belong to the same DP, and the D and the N of the same DP undergo agreement (see Longobardi 1994). In Bošković (1997), I suggested that C&P 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 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 Bošković (2005): since the agreement between *there* and the associate is actually D-N(P) agreement, the expletive needs to agree with an N(P), rather than a C&(P).

2. The Phase-Impenetrability Condition and linearization

Above, we have seen a number of empirical arguments that the PIC does not hold for Agree. In this section we will see that this state of affairs is a natural consequence of the line of research pursued by Stjepanović and Takahashi (2001), Lee (2003), and Fox and Pesetsky (2005), where the PIC effect for successive cyclic movement essentially follows from phonological considerations. More precisely, the authors in question argue that if an element that is to move outside of a phase does not move via the Spec of the phase, the structure cannot be properly linearized in PF. In what follows, I will offer a particular instantiation of this analysis and explore its consequences.

Adopting multiple Spell-Out, 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 (2005), 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 (2005) do here. I propose that once Y is ordered within a spell-out unit K, the phonology cannot receive any higher units 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 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.[29] 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.[30] 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.[31] 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 (2005) 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.[32] Since we have already achieved the PIC effect via PF, it would be redundant to duplicate the phase/PIC effect in the syntax, which would happen if we were to assume, following Chomsky (2000), that only the edge of a phase is visible from outside of the phase *in the syntax* (i.e. the PIC). I therefore follow Fox and Pesetsky (2005) and Stjepanović and Takahashi (2001) in assuming that the PIC should be eliminated as a

[29]I 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.

[30]Notice 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.

[31]For the moment, I ignore the copy theory of movement, returning to it below.

[32]This point is in the spirit of Fox and Pesetsky, but the actual implementation of the point is rather different (see also footnote 30). 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]]?

syntactic locality condition. (Chomsky (in press) also hints at this.) 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 (2005) and Stjepanović and Takahashi (2001), 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.[33] In the system adopted here 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.

2.1. Non-trivial chains and multiple Spell-Out

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 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

[33]Chomsky (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 the discussion in section 2.1).

motivated by PF considerations, which has ample empirical motivation (see Abels 2001, Bobaljik 2002, Bošković 2001, 2002b, 2004b, Bošković and Nunes in press, Franks 1998, Hiramatsu 2000, Lambova 2002, 2004, Landau 2003, Nunes 2004, Pesetsky 1998, Reglero 2004, and Stjepanović 1999, 2003), can ever be allowed.[34] 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

(24) $[_{ZP}\ [_{XP}\ X...Y]]$

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 (as noted by Steven Franks (personal communication), the following assumption is not necessary under the remerger theory of movement): what is sent to the phonology is the whole phase XP, but

[34]Notice that I don't have in mind here the pronunciation-of-a-lower copy system of the kind adopted in, for example, Groat and O'Neil (1996), which is intended to replace traditional LF movement within one-cycle syntax. As discussed above, this system is an alternative to Agree, which is also meant to replace traditional LF movement within one-cycle system. (More precisely, both of these replace what would have been weak feature checking in early Minimalism.) The kind of pronunciation of a lower copy I have in mind here is a low-level PF effect. It involves regular overt movement, but the pronunciation of the higher copy of the movement yields a PF violation: PF then realizes a lower copy to avoid the PF violation. Such pronunciation of a lower copy would have been considered to involve strong feature checking in early Minimalism– it does not replace traditional LF movement. (To mention just one case here, Bošković 2002b shows that with multiple wh-fronting languages, which otherwise <u>always</u> front all (non-D-linked) wh-phrases in overt syntax and pronounce them in the fronted position, in certain contexts the pronunciation of the highest copy of the fronted wh-phrase would cause a PF violation. PF remedies the violation by pronouncing a lower copy. I show that although they are pronounced in a non-fronted position, the wh-phrases in question do not behave like wh-phrases that were traditionally assumed to undergo LF wh-movement. For example, in contrast to these, the wh-phrases in question can license parasitic gaps, just like wh-phrases that undergo overt wh-movement.)

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 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 (24) 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,[35] 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 (25), 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).

(25) $[_A$ X1 $[_B$ X2 $[_C$ X 3 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 (26)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 PF realization of the highest copy, at this point X3 is marked for deletion (see (26)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

[35]See 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.

as the sole survivor of the copy-deletion process (see (26)c).

(26) a. [$_C$ X3 ~~X4~~]
b. [$_B$ X2 [$_C$ ~~X3~~ ~~X4~~]]
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-trival 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.

In this respect, recall that, as noted in footnote 33, 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 does not freeze X for Agree.[36]

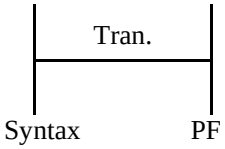
[36]A reviewer suggests that Spell-Out involves replacement of syntactic features and relations by morphophonological features and relations–Agree should then be sensitive to the PIC since inside a phase head complement there would be no syntactic features to agree with. Notice, however, that if syntactic features are replaced by morphophonological features as part of the transfer to the phonological component (i.e. during the transfer operation), the syntactic component itself should be unaffected by it; the syntactic features should still be present in the syntactic component, being replaced by the morphophonological features only in the phonological component.

We have seen in section 1 that there is considerable empirical evidence that, in contrast to Move, Agree is insensitive to phases/PIC. What we have done in this section is provide a theoretical explanation for the insensitivity of Agree to the PIC. The different behavior of Agree and Move with respect to the PIC follows from the approach on which PIC effects for successive cyclic movement follow from phonological considerations (more precisely, considerations of the syntax-phonology interface).

2.2. Identifying the moving element

We have seen above that if X is ever going to move, it cannot be contained in a unit that is shipped to Spell-Out, since this would cause a PF violation. X then has to move to SpecYP, where YP is a phase, in order not to get caught in a spell-out unit. The analysis implies that there is some kind of marking on X indicating its need to move. So, how do we know that X will need to move? The question is not innocent, since in many cases, the real trigger for the movement of X may be several clauses away from X, in fact, it may not even be present in the structure at the point when X needs to start moving. In order to deal with cases of this kind, I argue in Bošković (2005) that the marking indicating the need for overt movement, which is standardly taken to be a property of the target (the EPP property in the current approach, and strong features in early Minimalism) should be placed on the moving element, not on the target, which is exactly what we need given the discussion in section 2.1.

(i)



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 standard assumptions, some of which would need to be given up if the cycle were to be defined on phases alone. (Chomsky 2000 also seems to assume that the syntactic cycle should not be defined on phases alone, see his p. 132 (condition (53)) and pp. 136-137 for various approaches to the cycle.) Thus, I assume the following: (a) The cycle is defined with respect to the target of movement/Agree (this means that in principle we can return to a lower level to pick a moving element, or 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 cycle to rule out such cases (see, for example, the discussion of (24)); (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 (split) IP).

To appreciate the problem, consider (27), the case of successive cyclic movement (in what follows, for ease of exposition I ignore vP as a phase).

(27) What$_i$ do you think [$_{CP}$ t_i [$_{C'}$ that Mary bought t_i]]?

Chomsky's (2000) account of (27) is based on the PIC. Here is the gist of the account (which does not assume the modifications adopted in section 2.1.) Given the PIC, since CP is a phase, *what* can only move out of the CP if it first moves to the Spec of the CP. This movement is implemented by giving the head of the CP phase the EPP property, which is satisfied by filling its Spec position. The EPP then drives movement to the Spec of the CP. After the movement, *what* is accessible for movement outside of the CP. Regarding complementizer *that*, Chomsky assumes that *that* may, but does not have to, have the EPP property. (28) instantiates the no EPP property option.

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

As for (27), although in principle *that* does not have to have the EPP property, the no EPP option for *that* is ruled out by the PIC.

As noted in Bošković (2005), example (29) raises a serious problem for this analysis, 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 in (27). (Notice that we cannot appeal to the Doubly Filled Comp Filter, since nothing changes if *that* is replaced by a null C, as in **Who thinks what Mary bought*.)

(29) *Who thinks what that Mary bought?

To deal with the problem, Chomsky (2000:109, 1999:29) proposes making the assignment of an EPP property to non-true EPP heads (i.e. heads that do not always require a Spec) conditioned on it being required to permit successive cyclic movement. The embedded clause head in (27) 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 (28) and (29) cannot be assigned the EPP property since the assignment is not necessary to permit successive cyclic movement. The obvious problem for this

analysis is look-ahead. Both (27) and (29) at one point have the structure in (30).

(30) $[_{CP}$ what$_i$ $[_{C'}$ that Mary bought $t_i]]$

To drive movement to SpecCP, complementizer *that* must be given the EPP property at the point when the embedded clause is built. But at that point we do not know whether the assignment of the EPP property will be needed to make successive cyclic movement possible. We will know this only after further expansion of the structure. If the structure is expanded as in (29), it will not be needed, hence disallowed, and if the structure is expanded as in (27), it will be needed, hence allowed. In other words, at the point that structure building has reached in (30) we need to know what is going to happen in the matrix clause. The look-ahead raises a serious conceptual problem for the analysis.

The problem is quite general. To appreciate this (and the solution to the look-ahead problem given below), consider (31)-(32), where XP is a phase and Y needs to undergo movement whose final landing site W is outside of XP (see (31)). In the scenario under consideration, Y needs to undergo successive cyclic movement to W via SpecXP. In accordance with the Activation Condition (Chomsky 2000), which requires that Y have an uninterpretable feature to be visible for movement, Y has an uninterpretable feature K, which makes it visible for movement.[37] (32) represents the same scenario, but before W enters the structure. (I assume that K is either checked as a reflex of F-feature checking between W and Y or that W has a K feature that can check the K feature of Y. For ease of exposition, I represent the latter option.)[38]

[37]In Bošković (2005) I show that the Activation Condition follows for Move from independently needed mechanisms, i.e. it is a theorem. As for Agree, I argue that it simply does not hold for it (see in this respect footnote 9). The reader should bear this in mind.

[38]The 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? Notice also that in Chomsky's (1995) system, the uK of Y would be a fully specified feature in need of checking, while 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 since 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 and leads to a considerable proliferation of features involved in checking. Nevertheless, much of the discussion below will be neutral with respect to the two options noted above (checking vs. valuation). I will adopt checking primarily for ease of exposition (see, however, Bošković in press for empirical evidence for the superiority of the checking approach).

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

uF iF

k uK

EPP

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

iF

uK

Since XP is a phase, given the PIC, if Y is to move outside of XP it first has to move to SpecXP. In Chomsky's system 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 (32) we need to know that W will enter the structure later, as in (31), which raises a serious look-ahead problem, as discussed above. Let us see how the look-ahead problem can be resolved. The problem with (31) is that the EPP 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. The problem is quite general under the EPP-driven movement approach. The gist of the look-ahead problem that arises under this approach is that the EPP diacritic indicating that Y moves is placed on an element (W) other than the one that is undergoing the movement in question, but Y often needs to move (i.e. start moving) before W enters the structure. The conclusion to be drawn from this state of affairs is obvious: we have been wrong in placing the diacritic indicating the need for overt movement on the target (W)–the diacritic should be placed on the moving element (Y). A straightforward way of accomplishing 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. This is obviously not a particularly appealing way of resolving the issue at hand, so we should try to do better than this. In Bošković (2005) I suggest a way of resolving the issue that appeals to a mechanism that helps us eliminate the EPP diacritic altogether.

First, a short digression is in order regarding the underlying assumptions. In Bošković (2005) I argue for the following formulation of Last Resort: X can undergo movement iff without the

movement, the structure will crash.[39] I also argue on empirical grounds that there is no feature-checking in intermediate positions of successive cyclic movement. (Thus, *what* does not undergo feature checking with *that* in (27).) I refer the reader to Bošković (2005) (see also Bošković 2002a and Boeckx 2003a–note that Chomsky in press also seems to adopt this position) for a number of empirical arguments to this effect. We are now ready to return to the issue of where the driving force for movement lies. (Recall that placing it on the target leads to a rather serious problem.)

It is standardly assumed that a probe must c-command the goal (i.e. the former probes only its c-command domain), and that the probe must have an uninterpretable feature; otherwise, there would be no need for it to function as a probe. Following an important insight of Epstein and Seely (1999) (see also Bošković 2002a, Abels 2003, Boeckx 2003b, 2006, and Epstein and Seely 2006) in Bošković (2005) I assume that the correlation between functioning as a probe and having an uninterpretable feature is a two-way correlation: just like a probe must have an uninterpretable feature, an uninterpretable feature (i.e. an element with an uninterpretable feature) must function as a probe.[40] In other words, checking of an uninterpretable feature K on X requires X to function as a probe–more precisely, uK of X can be checked and deleted *if only if* X c-commands the checker. This means that Y in (31)-(32) will need to undergo overt movement outside of XP in order to license its uK feature. In fact, pure Agree will not suffice for that even if Y is located in SpecXP, with no other phases intervening between Y and W.[41] Most importantly, we now know that Y will need to undergo overt movement outside of XP before W enters the structure: already at point (32) we know that the structure will crash unless Y moves outside of XP (uK on Y essentially says: I am moving!). In other words, Y will have to move to a position c-commanding the uK licenser in order

[39]Note that in evaluating crash, we cannot anticipate structure that will be built later; we can only look at the existing structure.

[40]The assumption has a number of empirical consequences. For example, it requires overt object shift in ECM constructions (after which the accusative NP and (a projection of) the traditional Case assigner c-command, hence can probe, each other). I refer the reader to Epstein and Seely (2006) and Bošković (2005) for relevant discussion.

[41]This is an important point. We are now ruling out the possibility (which would otherwise be allowed given the discussion below) of Y moving to and staying in the Spec of a cyclic head, i.e. in what would normally be the highest intermediate position of successive cyclic movement, where it would undergo Agree with a higher probe. This is desirable since, as discussed in Bošković (2005), this possibility does not seem to be realized. Note that this possibility would not be ruled out if we were to adopt an interesting alternative to the analysis adopted in the text, suggested by Duk-Ho An (personal communication), on which an uninterpretable feature would be considered an illegitimate PF object (as in Chomsky 1993), hence Y with a uK could not be sent to Spell-Out since that would cause a PF crash.

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. Notice that the movement to SpecXP conforms with Last Resort (cf. the above formulation of Last Resort) although it does not involve any feature checking between Y and X, a desirable result in light of the arguments against feature checking in intermediate positions offered in Bošković (2002a, 2005) and Boeckx (2003a). 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]

The analysis also deduces generalized EPP effects. (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.) We have already seen that there is no need to mark intermediate heads, such as X in (31)-(32), with the EPP property to drive movement to their Specifiers. The movement takes place so that the element undergoing movement escapes being sent to Spell-Out, which would freeze it for the possibility of movement, leaving its uninterpretable feature unchecked. Now, the generalized EPP effect is being deduced in its entirety. Thus, Y in (31), repeated here, now has to move to SpecWP even if W does not have the EPP property, which is then dispensable.[43]

[42]See 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 un 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.)

[43]See Epstein and Seely (1999, 2006) for discussion of the traditional EPP in this context, which is generalized in Bošković (2005), with an exploration of a number of additional consequences and an extension to successive cyclic movement and wh-movement. (In fact, even the analysis of the traditional EPP effect adopted in Bošković 2005 is quite different from Epstein and Seely's analysis, since it does not rely on the Inverse Case Filter. While Epstein and Seely crucially appeal to the Inverse Case Filter in their deduction of the traditional EPP, the Inverse Case Filter is dispensable under the analysis proposed in Bošković 2005.) I refer the reader to Bošković (2005) for a more detailed discussion of the Generalized EPP.

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

uF iF

k uK

~~EPP~~

Under the above analysis, generalized EPP effects essentially follow from the Activation Condition (i.e. the uK of the moving element), which itself follows from something else (cf. footnote 37). Since the beginning of the Minimalist Program there have been various ways of implementing the generalized EPP effect formally: in early Minimalism this was done via strong features, and in the current theory via the EPP diacritic, which indicates that certain heads need Specifiers. In the above 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. The interesting twist of the analysis is that 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 whether overt movement movement will take place before its target enters the structure. This is quite generally in line with the move in Bošković's (2005) system to moving-element-driven movement, as opposed to target-driven movement, and exactly what we need given the discussion in section 2.1. What is important for our current purposes is that given that an uninterpretable feature must serve as a probe, the uK of Y in (31)-(32), whose presence is forced by the Activation Condition (which is actually deducible, cf. footnote 37), helps us identify Y as an element that will need to undergo overt movement already at the point where Y is embedded within the first phase (i.e. (32)). Since we know that Y will have to move, it has to move to SpecXP in order not get caught in a spell-unit, as discussed above.

It is also worth noting the restrictiveness of the above system, which should be taken as a conceptual argument in its favor. Thus, in a configuration like X...Y, where X asymmetrically c-commands Y and X and Y are involved in K-feature checking, marking the K feature uninterpretable on Y will always lead to movement of Y to XP, i.e. it will result in Move. On the other hand, marking it uninterpretable only on X will always lead to pure Agree.

3. French wh-in-situ and Agree

In section 1 we have seen a number of arguments that Agree is not constrained by phases/PIC. In this section I will discuss a potential problem for this claim.

In Bošković (1998) I 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.[44] 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:

(34) *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?'
(35) Qui Jean et Pierre croient-ils que Marie a vu?
(36) Marie a vu qui?

(34) shows that long-distance wh-in-situ is disallowed in French, although French in principle allows matrix wh-in-situ (see (36)).[45] On the other hand, overt wh-movement in long-distance questions is allowed (see (35)). In Bošković (1998) I interpreted the contrast between (34) and (35) as indicating that covert A'-movement, i.e. Move F, which in the current framework should be reanalyzed as

[44]For relevant discussion, see also Bobaljik and Wurmbrand (in press), where Bošković's (1998) conclusion is extended to A-dependencies.

[45]The 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 2000 and Cheng and Rooryck 2000, among others). Note that in Bošković (2000) I argued 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; i.e. it should not involve a counterpart of traditional LF movement; see Watanabe 1992 and Tsai 1994, among others, for relevant discussion).

Agree, is more local than overt A'-movement (more precisely, the former is clause-bounded).[46] 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 the PIC? Consider first (34). 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 (see also Boeckx and Jeong 2004). 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.[47] What about (35)? The intervention problem discussed above with respect to (34) does not arise in (35). As discussed above, in examples like (35) the wh-phrase moves to the embedded 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 (34) (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.[48] We see here at work a rather interesting aspect of the current analysis: although

[46]See Bošković (1998) for a number of additional arguments to this effect.

[47]The reader is referred to Bošković (2005) for a more general discussion of wh-dependencies in the current system. Roughly, with wh-in-situ, the wh-feature of the wh-phrase is interpretable, while the wh-feature of C is uninterpretable. (It is in fact always uninterpretable. Recall also that I argue in Bošković 2005 that the Activation Condition does not hold for pure Agree (cf. also Bhatt 2005). I also argue that in constructions involving wh-movement, wh-phrases have an uninterpretable feature.)

Regarding French, the reader is also referred to 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 matrix C does not need to undergo feature-checking with the embedded clause wh-phrase, in contrast to (34), where the embedded clause wh-phrase is the only wh-phrase that can feature-check the interrogative matrix C. Notice also that in (36), no head specified for the wh-feature intervenes between the wh-phrase and the C.

[48]For relevant discussion, see also Abels (2003). The above 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 *v*s.) Overt movement to SpecTP is possible even in the configuration in (i).

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.

Finally, it is worth noting that (34) is another illustration of redundancy between the PIC and intervention effects when it comes to Agree, which suggests that we should not constrain Agree with both of these mechanisms.[49]

4. Conclusion

I have argued that Move and Agree behave differently with respect to phases/the PIC and intervention effects. More precisely, in contrast to Move, Agree is not subject to the PIC. However, intervention effects are stronger with Agree than with Move. Both differences have been argued to follow from independently needed mechanisms. In particular, the different behavior of Agree and Move with respect to the PIC follows from independently motivated assumptions regarding the syntax-phonology interface, more precisely, the line of research on which successive cyclic movement is forced by PF considerations, on which there is no need to take phases to define syntactic locality domains. In this respect, I have also proposed 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. Regarding intervention effects, such effects are stronger with Agree than with Move because with Move, successive cyclic movement makes possible skipping of potential interveners.

(i) T [$_{VP}$ <u>V</u> [$_{VP}$ V NP]]
(ii) T [$_{VP}$ V NP]

Suppose the higher, underlined V in (i) is an intervener for Agree, similar to the embedded C in (34). 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 (35), which skips the embedded C while undergoing successive cyclic movement (I depart here from Bobaljik and Wurmbrand). I leave spelling out the details of the analysis, and exploring its ramifications (which includes examining the full paradigm discussed by Bobaljik and Wurmbrand), for future research.

[49]For relevant discussion, the reader is also referred to Abels (2003), who argues that PIC effects are quite generally reducible to intervention effects.

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