PHASES AND BINDING OF REFLEXIVES AND PRONOUNS IN ENGLISH*

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This paper develops an analysis that relates the existence of local binding domains of reflexives and pronouns in English to the incremental interpretation of syntactic derivations (Chomsky 2000, 2001), emphasizing the role of the Conceptual/Intentional interface (i.e. bare output conditions) in shaping general principles of grammars. A significant development of the Minimalist framework is the idea that derivations operate through phases or multiple spell outs (Uriageraka 1999, Chomsky 2000, 2001). A key goal of phase theory is to reduce the strict cyclicity of derivations, and related locality effects of movement, to interface (bare output) conditions and economy conditions. In this paper I propose that incremental interpretation can be extended to capture a different type of locality: local binding domains effects of conditions A and B of Chomsky's (1981, 1986) Binding Theory. The proposal also provides a new perspective on the core contrasts between A-chain and A-bar chain w.r.t. binding and scope reconstruction effects as well as "online" binding (so-called Barss' sentences). The paper is developed in two sections: The first section discusses the nature phases and argues that Case partitions phase domains; the second section develops the analysis of phases as local binding domains in English.

1. Case and Phase

For Chomsky (2001, 2001), a phase is a syntactic object defined as a domain for cyclic interpretation. While Chomsky identifies vP and CP as phases, other categories have been identified as phases in the literature: DPs (Adger 2003); ApplP (McGinnis 2004); M-Domains and N-domains for morphology (DiSciullo 2003). A core proposal of this paper is that uninterpretable feature checking, Case in particular, defines a phase domain and makes DPs, AgrPs (or AspectP or ApplP), PPs and TPs potential phases. Why would Case play such a central role actually falls naturally from basic assumptions of the Minimalist program. As an uninterpretable feature, Case must delete before spell out to

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avoid a derivation from crashing. Case-checking points must therefore correspond to the earliest phase spell out points that a derivation must reach. In particular for DPs, their case checking position in a derivation is the earliest point at which they can enter LF through spell out. This would effectively make case-checking categories, such as AgrP, TP, ApplP and PPs potential categorical phases and potential entry points of DPs at LF. If this is one the right track, we should hope to find evidence that DPs are not semantically active prior to those entry points and in turn, that they crucially are semantically active at those very points.

As it turns out, there is interesting evidence supporting that prediction. It is widely recognized that A-chains and A-bar Chains display a number of asymmetries or mirroring properties w.r.t. binding and scope reconstruction effects. In addition, the relative boundaries of argument A-chains and A-bar chains is precisely defined by Case: Case is always at the head of an argument A-chain and at the tail of an argument A-bar Chain, i.e. Case defines the upper and lower boundaries of argument A-chains and A-bar Chains, respectively. These two generalizations are no coincidence under our analysis. As we argue directly, those asymmetries indicate that DPs are semantically inert before the Case Checking point, while being active at and beyond that same entry point. As such, they directly support our proposal that Case-checking defines potential phase categories and sets the transitional boundaries of A-chains and A-bar Chains, i.e. the minimal point at which a DP transits to LF and becomes semantically active.

Let us now consider those mirroring properties in details, in light of our analysis. The mirroring properties are summarized in (1) for A-chains and (2) for A-bar chains.

(1) **A-chains**

a. Feed A-Binding:
John$_i$ seems to himself [t_i to be happy]

b. No Binding Reconstruction (Chomsky 1995:210)
[That John$_i$ was asleep]$_j$ seems to him$_i$ [t_j to be correct]

c. No Scope reconstruction (Lasnik 2003: 134)
[no one]$_i$ is certain t_i to solve the problem
it is certain that no one solved the problem

d. No WCO effect:
Who$_i$ seems to his$_i$ mother [t_i to be intelligent]

(2) **A-bar chains**

a. Do not feed A-Binding:
*Who$_i$ does [each other$_i$'s supporters] like t_i

b. Binding Reconstruction

*[Which portrait of $John_i$]$_j$does he_i prefer t_j

c. Scope Reconstruction:
This man, some picture of whom everyone knows, … (narrow scope)

d. WCO effect:
?*Who_i does [his_i supporters] like t_i

These properties have been much discussed in the literature, and some more recently in Chomsky (1995) and Lasnik (2003), but no single explanation seems able to capture the striking mirroring behavior that A-chains and A-bar chains have w.r.t. various binding and scope reconstruction phenomena. Hence (1a) and (2a) contrast directly in that only the head of an A-chain can feed A-binding. Under our proposal, the DPs becomes active at the head of the A-chain where case is checked, and not before. In addition, it seems that this entry is actually fixed insofar as A-binding is concerned: the (maximal) C-commanding scope of a DP for A-binding is defined by its entry point at LF. This indeed captures why A-bar chains do not feed A-binding.

(1b) and (2b) also contrasts but w.r.t. reconstruction effects: Only A-bar chains seem to force reconstruction, triggering a Condition C effect in (2b), but not in 2(a). This contrast is also observed for condition A, as in (3a) versus (3b) below. [1]

(3) a. *$himself_i$ seems to him_i to t_i be intelligent
b. [Which picture of himself] does Mary think John likes t_i

Condition A (binding of anaphor *himself*) cannot be saved by reconstructing the A-chain in (3a), but apparently can in (3b) with the A-bar chain. Under our proposal, these contrasts indicate that reconstruction is only possible up to the entry point of DP at LF, i.e. at the tail of an A-Bar chain. The absence of reconstruction within A-chains follows directly as traces of A-chains are below the entry point and thus, inactive at LF.

Another type of example that could be interpreted as A-chain reconstruction was originally pointed out by Belletti and Rizzi's (1988) analysis of psych-verbs, such as (4).

(4) a. [Each $other_j$'s supporters]$_i$ frightened the $candidates_j$ t_i
b. [Each $other_j$'s supporters]$_i$ seem to the $candidates_j$ t_i to be unscrupulous.

[1] Examples like (3a) were treated as condition B violations in Belletti and Rizzi's (1988) analyis of Condition A as an "Anywhere" condition. However, examples such as (i) below , which is at worse marginal, raises considerable doubts as to the correctness of such analysis. Imagine a context where John is watching a pre-recorded TV quiz show in which he was the participant:

(i) ?$John_i$ expected $himself_i$ to seem to him_i t_i to be more intelligent

However Lasnik (2003) seriously questions the grammaticality of such examples and discusses numerous other similar ones that are clearly ungrammatical, such as (5).

(5) a. *[Each other$_j$'s supporters] supported the candidates$_j$
b. *[Each other$_j$'s supporters] asked the candidates$_j$ to be more supportive.

In addition, an alternative analysis of (4) is available in terms of online binding à la Lebeaux (1988), which does not require reconstruction per se. Basically, *each other* is bound prior to A-movement.

Back to the contrasts in (1) and (2), the contrast between (1c) (from Lasnik 2003: 134) and (2c) now involves scope reconstruction. While (2c) clearly allows a narrow scope reading after reconstruction, Lasnik points out that (1c) doesn't allow the interpretation that would result from reconstructing the quantifier in the initial position of the A-chain. The same conclusion was reached in (Chomsky 1995:327) based on the following contrasts.

(6) a. (It seems that) everyone is not there yet
b. I expected everyone not to be there yet
c. Everyone$_i$ seems t_i not to be there yet

As Chomsky comments: "Negation can have wide scope over the quantifier in (a), and it seems in (b), but not in (c)…reconstruction in the A-chain does not take place, or so it occurs".

Again, the mirroring properties of A-Bar chain and A-chain w.r.t. scope reconstruction is naturally captured under our proposal. The absence of scope reconstruction with A-chain is explained along the same line as binding reconstruction: The targeted reconstruction DP position does not exist at LF.

Finally, consider the contrast between (1d) and (2d) involving WCO effect. Most configurational approaches to WCO (e.g. Bijection Principle, Co-bound Variable condition, etc.) assume that some structural condition only applies to Operator-variable constructions, at the exclusion of A-chains. This can perhaps be justified if traces of A-chains are not variables (thus escaping any condition on co-bound variables), however, this in turn excludes a purely contextual definition of variables (to prevent traces of A-chains as locally A-bar bound variables) and requires an intrinsic definition of variables that is related to Case, which is not without problems for, e.g. PRO as a variable. Under our analysis, the absence of WCO with A-chains follows directly from the fact there is no WCO configuration created by A-movement, i.e. traces of A-chains are not accessible at LF.

In sum, our prediction that a DP is semantically inactive prior to its case-checking and transfer to LF is supported by the mirroring properties of A-chains and bar-chains w.r.t. binding, scope, reconstruction and WCO effects. Under our proposal, Case features must delete prior to spell out and therefore, Case

checking positions define the minimal phase spell out/entry points of DPs at LF as well as the transition point between argument A-chains and A-bar Chains. That entry point also fixes the c-commanding scope of a DP for binding (i.e. Binding occurs at LF) as well as its lowest reconstruction position. We will therefore adopt the following working hypothesis.

(7) Case feature checking (through spec-head) allows phase spell out and defines potential phase categories.

As a consequence of (7), syntactic categories where case-checking occurs should all be potential phases: DPs (Adger 2003), ApplP (McGinnis 2004) and I now propose, AgrPs, TPs and PPs. Whether Case is the only uninterpretable feature responsible for determining potential phase categories remains an open question in this paper. Notice that AgroP really is an extended projection of *v* and is therefore basically corresponding to the *v*P phase of Chomsky (2001). The crucial difference being that Case is the defining notion for that phase.

In the next section, an analysis of Local Binding Domain for reflexives and pronouns in English is developed based on the assumption that Case defines phasal categories and that phases, in turn, are the domains over which local binding is defined.

2. Phases and Binding Conditions A/B

Generative grammar has recorded some attempts at unifying local domains for binding and movement, starting as early as Bouchard (1981) and Aoun (1982). While subsequent accounts have not pursued that direction (Chomsky 1986, Reinhart and Reuland (R&R) 1993, among others), there is a legitimate appeal to this possibility from a theoretical standpoint. If indeed phases are the source of locality and strict cyclicity of movement, then finding that other local properties of grammar are exploiting the same fundamental architectural design would provide significant support for the notion and the nature of phases. In turn, it would make the system much more efficient and economical, as seemingly independent grammatical domains would emerge from a similar source.

In this second section, I develop an analysis of the nature of local binding domains for reflexives and pronouns in English based on the proposal in (7) which I will refer to as Case Phase. Under this analysis, local binding domains essentially reflect the accessibility of antecedents within a phase at the C/I Interface. Assuming on the one hand that DPs are semantically inert before being spelled out at the C/I interface and, on the other hand, that a reflexive (by opposition to a pronominal) is an element morphologically marked to be bound as it enters the C/I interface, then reflexive binding indicates that an anaphor has been spelled out in the same "accessible phase(s)", as its antecedent. In other words, "local binding domains" would correspond to "accessible phase domains".

Assuming along Chomsky (2001) that grammatical operations can span over at most two phases, as defined in the Impenetrability Condition in (8), I propose that Binding Conditions A and B can be stated as (9a,b):

(8) Phases Impenetrability Condition
(Chomsky 2001)

The domain H is not accessible to operations at ZP; only H and its edges are accessible to such operations.

$[_{ZP}\ Z \ldots [_{HP}\ \alpha\ [\ H\ YP]]]$

(9) a. Condition A
A reflexive anaphor must be bound in its accessible phases

b. Condition B
A pronoun must be free in its accessible phases

According to (8), a relation within "accessible phases" can span at most two phases, provided that one of the element stands at the edge of the lower phase (thereby escaping it). For instance, if α is at the edge of a phase HP, it is accessible to any element in the next phase up, namely ZP. Applied to binding relations, the local binding domain of reflexives would correspond to that "window" of accessible phases at spell out. A basic example is shown in (10) for a transitive predicate.

(10) Legend: **(** = phase
~~John~~ = trace/copy
John = spelled out point

($[_{TP}$[John$_i$]**(**$[_{AgroP}$himself$_i$$[_{vP}$~~John~~$_i$ likes ~~himself~~$_i$]]]

TP and AgroP are the Case phases in this structure (I am assuming, contra Chomsky 2001, that accusative case is checked in spec of AgroP, i.e. covert movement applies on the mapping to C/I). *John* becomes "semantically active" only at TP phase, i.e. after nominative Case is checked on T. *himself* in Spec of AgroP is also active and has *John* in Spec TP as antecedent. As *himself* sits at the edge of phase AgroP, *John* is contained and accessible in the next phase, TP. In sum two "accessible phases", as defined by PIC, correspond to the Binding domain for reflexive and the non-binding domain of pronouns in English.

The analysis extends directly to (11) ECM constructions if we assume, following Lasnik's (2003), that the subject of the infinitival clause raises to AgroP of the exceptional case-marking verb for case-checking.[2]

[2] Note that this prediction distinguishes our analysis from those that are based on the notion of co-argumenthood to predict the distribution of obligatory reflexives, such as Reuland and Reinhart (1993). For Reuland and Reinhart, cases like ECM and small

(11) ECM and Small clauses: parallel to transitive verbs

a. *John*$_i$ believes *himself*$_i$ to have won
(([$_{TP}$[John$_i$] ([$_{AgroP}$ himself$_i$ [$_{vP}$ ~~John~~ believes [$_{TP}$ ~~himself~~$_i$ to have won]]]

b. *Lucie*$_i$ heard *herself*$_i$ praise Max
[$_{TP}$Lucie ([$_{AgroP}$ herself $_i$ [$_{VP}$ heard[$_{SC}$ ([$_{Agr}$Max [VP ~~herself~~$_i$ praise ~~Max~~]]]]]]

The analysis is also correct in cases where the reflexive is located in the object position of the small clause with an intervening disjoint subject (examples taken from Reinhart and Reuland 1993). In (12), the reflexive cannot be bound by the main subject, but it can be so by the subject of the small clause in (13).

(12) (R&R:688)
Lucie$_i$ heard [Max praise *her*$_i$/**herself*$_i$]
[$_{TP}$Lucie ([$_{AgroP}$ Max$_i$ [$_{VP}$ heard[$_{SC}$ ([$_{Agro}$ herself [VP ~~Max~~ praise ~~herself~~$_i$]]]]]]

(13) (R&R:688)
Lucie heard [*Max*$_i$ praise **him*$_i$/*himself*$_i$]
[$_{TP}$Lucie ([$_{AgroP}$ Max$_i$ [$_{VP}$ heard[$_{SC}$([$_{Agro}$ himself$_i$ [VP ~~Max~~ praise ~~himself~~$_i$]]]]]]

Hence in (12), the small clause subject *Max* raises to get its Case checked and thereby triggers an AgroP phase. Even after raising to the spec of the lower AgroP (for case-checking) and escaping it, *herself* stands in the domain of the higher AgroP phase and must therefore be bound within it, but its intended antecedent *Lucie* is located higher in the TP phase. In (13) however, the reflexive is properly bound within the higher AgroP phase, i.e. is bound by the small clause subject *Max*.

The analysis also extends to the subtle discrepancies noted by Reuland and Reinhart between argument PPs in (14) and adjunct PPs in (15), where the complementary distribution between pronouns and reflexives seems to collapse.

(14) Argument PPs (R&R:661)

a. *Max* speaks with *himself*/**him*
b. *Lucy*'s joke about *herself*/**her*

(15) Predicate and adjunct PPs (R&R:664)

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clauses as in (12)-(13) force their analysis into proposing that the notion of "co-argument" includes either Theta-marking or Case-marking, a spurious generalization which remains problematic for cases like (16) "John wanted for himself to be happy". See Canac-Marquis (2005) for more discussion on this issue.

a. *Max* saw a gun near *himself/him*
b. *Lucy* counted five tourists in the room apart *herself/her*

These examples first raise the question of the status of PPs as potential phases. As P marks Case, PPs could potentially define phase domains. However, it is generally assumed that PPs do not involve Case-checking under spec-head agreement and that most PPs actually assign inherent Case, i.e. case related to theta role assignment. One might therefore question whether inherent Case, insofar as it is related to theta-role assignment, is an uninterpretable feature –if a feature at all- and in any instance, a feature that would be cancelled in situ upon merging.

For our analysis, if the "in situ" cancellation of Case in PPs triggered a phase, it would imply that a DP within a PP could never be a reflexive, clearly an undesirable conclusion. Let us therefore assume that the absence of spec-head agreement and related movement makes PPs "weak" phases, which in turn implies that they do not count as phase domains for PIC.

Let us go back to the examples involving argument PPs. Argument PPs have their theta-role assigned by the verb and must be merged and spelled out along with the verb for interpretation. That assumption yields the correct results: Argument PPs will always require a reflexive if bound by a co-argument, either a subject in (16) or an object in (17) (= R&R:636).

(16) *Max*$_i$ speaks with *himself*$_i$
([$_{TP}$[Max$_i$] [$_{vPi}$ ~~Max~~ speaks [$_{PP}$with himself$_i$]]]

(17) Lucie explained *Max*$_i$ to *himself*$_i$/**him*$_i$
([$_{TP}$[Lucie] ([$_{AgrP}$Max$_i$ [$_{AgrP}$ [$_{vP}$~~Lucie~~ explained [~~Max$_i$~~] [$_{PP}$ to himself$_i$/*him$_i$]]]]

In contrast, adjunct PPs are not dependent on the verb for theta role assignment of their DP complement, which opens the possibility that they may or not spell out in the same phase as the verb. In the spirit of Lebeaux (1988) and Uriagareka (1999, within a multiple spell-out framework), PP adjuncts are merged independently of the main predicate/argument structure, through generalized transformations. This predicts that two structures are possible for adjunct PPs, depending on whether the PPs is merged at the edge or in the domain of an AgroP phase.[3] If PP merges at AgroP's edge, it escapes the AgroP phase for the purpose of PIC. In such case, a reflexive is required as shown in (18). If however PP spells out in AgroP's domain (e.g. in the VP), the reflexive is out and the pronoun is in, as in (19).

(18) ([$_{TP}$[John$_i$] [$_{AgrP}$a gun [$_{AgrP}$ [$_{vP}$~~John$_i$~~ saw ~~a gun$_i$~~] [$_{PP}$ near himself$_i$]]]]

(19) ([$_{TP}$[John$_i$] ([$_{AgrP}$a gun [$_{AgrP}$ [$_{vP}$~~John$_i$~~ saw ~~a gun$_i$~~ [$_{PP}$ near him$_i$]]]]]

[3] I keep assuming here that AgroP is actually an extended projection of *v* and therefore, the PP still modifies the *v*P as required by the interpretation.

The analysis therefore implies that there is no collapsing of the complementary distribution of reflexives and pronouns in those examples but rather, two distinct derivations are possible by virtue of the adjunct status of the PP, each derivation requiring a different type of anaphor.

This analysis of PPs further makes the prediction that if an antecedent is in the same phase despite the adjunct PP merging to AgroP, a reflexive is required. And indeed, such is the case when the antecedent is an object argument as in (20)= (R&R:668).

(20) John rolls the carpet$_i$ over *it$_i$/itself$_i$ (cf. *Max* rolled the carpet over *him/himself*)

a. ([$_{TP}$[John$_i$] ([$_{AgrP}$the carpet [$_{AgrP}$ [$_{v}$P~~John$_i$~~ rolls ~~the carpet$_i$~~ [$_{PP}$ over itself$_i$]]]]]

b. ([$_{TP}$[John$_i$] [$_{AgrP}$the carpet [$_{AgrP}$ [$_{v}$P~~John$_i$~~ rolls ~~the carpet$_i$~~] [$_{PP}$ over itself$_i$]]]]

(20a) is the derivation with the PP in the domain of the AgroP phase, and it is bound by the direct object, requiring a reflexive. In (20b), the PP is merged at the edge of the AgroP phase that is thereby escaped, but the direct object also remains in the same AgroP phase and a reflexive is still required.

The latter analysis of co-bound arguments seems to clash, however, with PPs in double object constructions. First note that the analysis of the dative shift example in (21) where the reflexive in the indirect PP is bound by the direct object, can be treated similarly to (20).

(21) I presented *Max*$_i$ to *himself*$_i$/**him*$_i$ (Larson 1988 ex (5))

([$_{TP}$[I ([$_{AgrP}$Max$_i$ [$_{AgrP}$ [$_{v}$P ~~I~~ explained [~~Max$_i$~~] [$_{PP}$ to himself$_i$/*him$_i$]]]]

However, in the case where the reflexive in the PP is bound by the subject, we would expect the reflexive to be excluded and the pronoun mandatory, as the reflexive is embedded in the AgroP domain defined by the direct object. Yet, the distribution is exactly the opposite, as shown in (22).

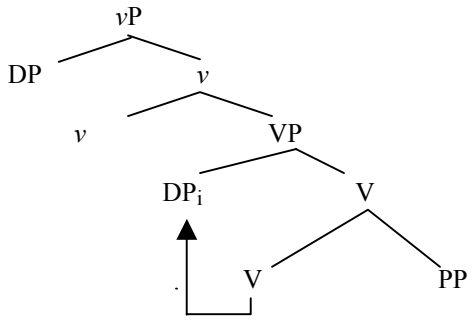
(22) *Lucie*$_i$ sent shoes to *herself*$_i$ /**her*$_i$

([$_{TP}$[Lucie$_i$] ([$_{AgrP}$ shoes [$_{AgrP}$ [$_{v}$P ~~Lucie~~ sent [~~shoes$_i$~~][$_{PP}$to herself$_i$/*her$_i$]..]

From the perspective of our analysis, the behavior of the reflexive in (22) directly contrasts with ECM (11) and small clause (12-13) where a reflexive cannot be bound by the main subject because of the intervening AgroP phase. Cleary, some crucial factor must distinguish these constructions from the double object one. An indeed, a closer look at the double object analysis of Larson

(1988) offers an interesting possibility when re-considered under minimalist assumptions. This is illustrated in (23)

(23) VP shell analysis (Larson 1988, Chomsky 1995, among others)



According to the VP shell analysis of Larson, the direct object is generated in the specifier of V. Though it is standardly assumes that V raises further in *v* and then DP in a higher AgroP for Case-checking, another plausible analysis is that the spec-head agreement configuration is already achieved at merger and DP need not raise for Case-checking (notice that V itself would still need to raise independently, arguably for predication of the external argument). In minimalist terms, this is arguably the most economical option. The result would in fact render this type of case checking configuration similar to inherent Case of PPs insofar as no movement is required to check Case. Let us explore this parallel further and assume that the configuration in (23) is one where only a weak phase is defined, by virtue of the lack of movement for Case checking. More generally, strong phases would now be defined by spec-head checking of Case (or any uninterpetable feature) resulting from movement. Under these assumptions, (22) can be reanalyzed as (24).

(24) *Lucie*$_i$ sent shoes to *herself*$_i$ /**her*$_i$

([$_{TP}$[Lucie$_i$] [[$_{vP}$ ~~Lucie~~ sent [shoes$_i$][$_{PP}$to herself$_i$/*her$_i$]]]

Notice that there is no AgroP phase anymore, as Case is assigned/canceled at merger in situ and by assumption, only a weak phase is created. The indirect PP object therefore lies in the main TP phase and if bound by the subject, must be a reflexive.

One more case involving a preposition falls naturally under our analysis, namely the reflexive subjects of *for*-clause:

(22) *John*$_i$ wanted for *himself*$_i$ to be happy

([$_{TP}$[John$_i$] [$_{vP}$~~John~~$_i$ wanted] [$_{CP}$ for [$_{TP}$ himself$_i$/*him$_i$ to be happy]]]]

According to standard analyses, *for* is a prepositional complementizer assigning structural case to the subject of the infinitive (Kayne 1981, Chomsky

1981). Since *for* is prepositional and does not trigger spec-head agreement, CP only creates a weak phase under our assumptions and the main TP is therefore the strong phase containing *himself* and its antecedent, *John*. The choice of the reflexive over the pronoun follows directly. Note that this type of example is another case distinguishing our analysis from those treating reflexivity as a property of co-arguments, as Reinhart and Reuland (1993). Clearly, the subject of the infinitival is not a co-argument of the main verb, and the case assigner *for* is not the main predicate either. The fact that a reflexive is mandatory in this context strongly suggests that co-argumenthood is not the definitive notion to capture its distribution.

The limited space in this paper does not permit us to analyze the various cases of reflexives in DPs in details. However, we can briefly look at what such an analysis would be in light of the current approach. Following Adger (2002), but also Svenonius (2005) and Hiraiwa (2005), DPs are strong phases. In our terms, this is also the case as DPs are Case-marked and until their case is checked, they cannot be spelled out. Assuming so, DPs therefore create a phasal binding domain for our conditions A and B and any reflexive embedded in a DP domain can only be bound by an antecedant within DP. That is generally the case with picture noun phrases with prenominal subjects, as in (24).

(24) a. *Mary*$_i$ likes ([$_{DP}$ John's picture of **herself*$_i$/*her*$_i$]

b. Mary likes ([$_{DP}$ *John's* picture of *himself*$_i$/**him*$_i$]

These cases do not pose any peculiar challenge to our analysis. The *of*-PP is a weak phase and the prenominal DP *John* is also a weak phase (and in any case, does not include the the anaphor), which leaves DP as the main phase and binding domain. Cases where no subject is present, as in (25), could be treated alog the lines of Chomsky (1986) proposal that a (controlled) PRO is accessible in those constructions.

(24) *Lucie*$_i$ saw a picture of *herself*$_i$/**her*$_i$

([$_{TP}$[Lucie$_i$] ([$_{AgrP}$ ([$_{DP}$ a PRO$_{j/i}$ picture [of her$_i$/herself$_i$]] [vP saw ~~a picture of herself~~$_i$]]

The analysis essentially follows the lines of (24), with PRO as the accessible subject in the DP phase. These are obviously the basic cases and more complex binding possibilities in DPs have to be considered in future work.

3. Conclusion

This paper extends the notion of phase, proposed in Chomsky (2001) to capture locality and cyclicity effects on movement, to local binding domains of pronoun and reflexives in English. First arguing that phases are partitioned on the basis of spec-head checking of uninterpretable features such as Case, I then propose that the local binding domains for reflexives and pronouns in English are defined in terms of accessible phase domains. The choice of a reflexive

(Condition A) over a pronoun (Condition B) is dictated by whether or not the antecedent is located in the same accessible phases at phase spell to the C/I interface.

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