

Anaphor Binding

What French Inanimate Anaphors Show

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The focus of this article is Condition A of the Binding Theory: how to formulate it and where the binding and the locality requirements it imposes come from.

In recent years, there have been several attempts to implement minimalist guidelines by eliminating Condition A of the Binding Theory (see Drummond et al., 2011 for a review) as an independent condition - surely a desirable objective. As a preliminary step to such attempts however, it must be known what the correct descriptive generalization for Condition A is. In fact, there is no consensus about this. As we will argue below, a central confound on the way to determining the descriptively adequate generalization (which ultimately needs to be explained) has to do with where for a given anaphor, the boundary lies between conditions under which it is subject to Condition A and thus behaves like what we will call a “plain” anaphor, and conditions under which it is “exempt” from it. To illustrate, consider the following sentences:

- (1) a. John likes pictures of himself.
b. John showed Bill pictures of himself.
c. John showed Bill pictures of themselves.

While Chomsky (1986) assumed that reflexives in (1a, b) are subject to Condition A, as early as Bouchard (1984), an argument was made that *himself* in all these sentences is not a “true anaphor” – thus not subject to Condition A - but a pronoun. This was due to (in this case) split antecedents being allowed in (1c), the (reasonable) assumption being that allowed split antecedence in a syntactic position shows that this position is exempt from Condition A. To conclude on that basis, as is often the case, that the position occupied by *himself* must be an exempt position is unwarranted. What such cases show is that it merely can be. Indeed it may be that *himself* in such a position behaves ambiguously, either as an exempt anaphor or as a plain anaphor subject to Condition A, the latter case being difficult to detect.¹ This confound is pervasive (although not universal - see Fox and Nissenbaum, 2004, section 3), and biases, wrongly as we will show, descriptive statements of Condition A, witness e.g. Drummond et al. (2011 p. 401): “We assume that a reflexive within a picture noun phrase that is bound from outside its containing noun phrase is not a ‘true’ reflexive subject to principle A [...] Rather, it is a pronominal with special logophoric requirements” and their footnote 16 citing major works sharing this assumption such as Pollard and Sag, 1992, Reinhart and Reuland, 1993, to which we can add Safir, 2004, Reuland 2011, etc...

In this article, we present a detailed case study of the behavior of (some) anaphors in French, the only language we seriously discuss, in which we aim to control for the plain/exempt distinction. The picture emerging from this case study is different to various degrees from what has typically been assumed in major studies of anaphoric systems (e.g. Chomsky, 1986, Pollard and Sag, 1992, Reinhart and Reuland, 1993, Safir, 2004, Reuland 2011).

As far as French is concerned, we conclude that for the core case of Condition A, Chomsky’s 1986 descriptive generalization (anaphors must be bound within the smallest complete functional complex containing it and a possible binder) is almost correct, with one amendment: a tensed TP boundary is opaque to the search for antecedent. In particular, anaphors in picture noun phrases as in (1) are subject (often, but crucially not always, vacuously) to Condition A, as Chomsky (1986) assumed.

Exploring further how these plain anaphors behave, we argue that the locality imposed on anaphor/antecedent relations by the core case of Condition A cannot be reduced to there being an Agree relationship holding in a course of a derivation contrary to many recent attempts (see Drummond et al. 2011, or Reuland, 2011 and references therein). Instead, it can be and should be, at least in French, formulated in terms of Phase theory - as others have argued for some other languages; we will outline

¹ This difficulty comes from the fact that exempt anaphors are often, but not always, more permissive than plain anaphors in terms of what antecedent they allow.

how this could be done. More precisely, we will argue that Condition A (i) must be viewed as a syntax/semantics interface condition, and (ii) is best stated as a requirement that an anaphor contained in some spell out domain have its antecedent in that domain.

The article is organized as follows.

In section 1, we discuss what binding theory ought to account for in general terms. In particular we recap why it is necessary, as is now well known, to separate plain anaphoric behavior subject to Condition A, from exempt anaphoric behavior subject to different restrictions. We next propose that this could in principle be done by studying the difference (roughly) between inanimate anaphors, which we argue must (in French) be plain, and animate anaphors, which do not have to be.

Section 2 establishes that Chomsky's 1986 descriptive content of Condition A is (nearly) correct by examining the behavior of these inanimate French anaphors. Given these conclusions, and those of section 4, new thinking is needed on how to derive the locality imposed by Condition A within current framework (cf. section 5).

The focus of Section 3 is the question of how plain and exempt anaphors are distinguished, an important question for the discussion in section 4. Given that inanimates are never exempt (in French) this section deals with inanimate anaphors and compares two ideas concluding in favor of the first one: (i) plain and exempt anaphors are distinguished solely on the basis of the properties of their antecedents; (ii) exempt anaphors are those lacking an (eligible) coargument, as proposed by a.o. Reinhart and Reuland, 1993, Pollard and Sag, 1992, as well as Safir, 2004, Reuland, 2011.

Section 4 establishes that plain anaphors must be exhaustively bound, while exempt anaphors do not have to be. Given that our characterization of plain anaphors is distinct from all predecessors, this is a new result (such a conclusion was false in all previous versions of the binding theory –see e.g. Hicks 2009). That binding for Condition A is different from other types of binding (e.g. of exempt anaphors, bound pronouns etc...) requires an explanation: this is discussed in the next section.

Section 5 discusses boundary conditions on how the results of sections 2 and 4 should be integrated in the grammar. It shows why these results entail that it cannot be reduced to derivational Agree, why the locality imposed by Condition A should be seen as a syntax/interpretation interface condition formulated in terms of Phase theory, and what properties a theory of plain anaphor binding and phases ought to meet to be able to deal with plain anaphor binding locality.

Section 6 concludes by briefly discussing unsettled general questions.

1 A central problem: distinguishing plain from exempt anaphors

Starting from (Standard American) English, the contrast between the following two examples:

- (2) a. The moon spins on itself.
b.* The moon influences people sensitive to itself.

shows that an expression such as *itself* tolerates a local antecedent in (2a) but not a more distant antecedent as in (2b). Call such distance sensitive expressions “plain” anaphors.² In a given language the binding theory seeks to answer the following kind of questions, with hopes of finding crosslinguistically valid answers:

1. Which expressions are plain anaphors?
2. What makes an expression (plainly) anaphoric?
3. What are the descriptive generalizations concerning the distribution of plain anaphors?
4. Where do these generalizations come from: how should they be derived from theoretical primitives?

Here, we will not attempt to answer all these questions. We will try to identify a subset of plain anaphors in French, and address question 3 (in sections 2 and 4), and question 4 in part (in section 5).³

² Throughout, we mean what Reinhart and Reuland 1993 call SELF anaphors (such as English *itself*). See section 3.1

³ One common answer to question 2 is that anaphors are referentially deficient, which strikes us as nearly tautological. We would take as explanatory a compositional theory of what makes an expression such as e.g. *himself* an anaphor based on the properties of its parts (a pronoun and *self*).

Clearly, answering the first question, at least partially, is a prerequisite to answering the others: if we do not know what the plain anaphors are, it is difficult to answer questions about them. The difficulty of answering this first question is illustrated by the English paradigm below:⁴

- (3) a. John likes himself.
 b.* John says that Mary likes himself.
 c. John says that Mary likes everyone but himself.

Himself seems to be the kind of expression needing a local antecedent as the contrast between (3a) and (3b) shows, yet (3c) is typically judged fine even though the very same element *himself* is involved, and by reasonable measures (depth of embedding), is further away from its antecedent than in (3b).⁵ this is why a distinction must be postulated between plain anaphors subject to Condition A and exempt anaphors not subject to it.⁶ But then, some way must be provided to separate instances of plain anaphors, e.g. of *himself*, from other, exempt, instances.⁷

Two influential but superficially incompatible types of approaches to how to characterize this algorithm coexist: one, antecedent-based, compatible with Chomsky's 1986 version of Binding Theory which we call the classical (theory of) Condition A; another position-based proposal defended in Pollard and Sag (1992), Reinhart and Reuland (1993) modified in various ways since (Safir, 2004, Pollard, 2005, Reuland, 2011) attributing a crucial role to the notion of coargumenthood. These two approaches make substantially different predictions regarding the distribution of plain anaphors. The latter approach contends that the set of positions allowing plain anaphors (roughly cases in which the anaphor has a coargument) is disjoint from the set of positions (roughly cases in which the anaphor does not have a coargument). The former makes no such claim.

To decide the issue, we propose to rely on the substantial amount of (descriptive) work done since these theories were first proposed. In particular, some crosslinguistic generalizations seem to widely hold of exempt anaphors:⁸ while exactly how exempt anaphora functions is not known - there are many perhaps not incompatible proposals regarding what is involved e.g. logophoricity, perspective, point of view, empathy⁹ - there is a wide and robust (albeit usually implicit)¹⁰ crosslinguistic generalization, namely that the referent of the antecedent of an exempt anaphor must in principle be capable of speech, thought, of holding a perspective, of having a point of view or of being an empathic target. While there are circumscribed exceptions (which interestingly appear to be culture sensitive regarding sentience), this means that such referents must be live persons.¹¹

The simple descriptive generalization regarding antecedence of exempt anaphors provides a possible angle, to our knowledge not exploited to this end before, to directly investigate what is not covered under exempt anaphora: if exempt anaphors must be animate, looking at the behavior of inanimate anaphors should tell us the conditions plain anaphors are subject to (e.g. Condition A).

In the next section, we look at the behavior of two French anaphoric expressions (namely *elle-même* - lit. *her-same*, *her-even* - and possessor *son* - *his/her/its*- as part of the expression *son propre* - *his/her/its-own*). We will show that each can behave either as a plain or as an exempt anaphor. We will also show

⁴ Unless it is explicitly discussed – see section 4 - the bound vs coreferential difference is irrelevant to our discussion: throughout, the data would be the same whether the antecedent of an anaphor under discussion is quantificational – thus requiring semantic binding - or not.

⁵ This star is the standardly reported judgment. Dialects of English allow such sentences (Zribi-Hertz, 1989). See section 3.2.5.

⁶ Thus, the four questions above really are eight questions, four for plain anaphoric behavior and four for exempt anaphoric behavior.

⁷ For an argument that it is not (e.g. historically) accidental that the very same elements exhibit both behaviors, see Charnavel, 2013.

⁸ As a first approximation, we take to be instances of exempt anaphors these expressions that can, like plain anaphors, be bound locally (unlike pronouns), and long distance. This will be refined in the course of the discussion.

⁹ See Charnavel (2014) for an overall view and proposal building on e.g. Anand, 2006; Huang & Liu, 2001; Kuno, 2004; Oshima, 2006; Schlenker, 2003; Sells, 1987; Zribi-Hertz, 1989.

¹⁰ An explicit mention of this fact is made for Icelandic in Sigurðsson (1990).

¹¹ We will from now on code the relevant distinction as animate vs. inanimate but it should be kept in mind that this is too rough a characterization as seemingly non animate terms can be used as proxy for people (e.g. the parliament, Washington, Japan) that is as referents capable of thought or point of view, etc...

that when inanimate, these French elements (i) are never exempt, (ii) behave like anaphors subject to the classical Condition A.

2 Locality from *son propre* and *lui-même*

We now look at the behavior of two elements:

(i) *elle-même* (lit. *her-same, her-even*) and their paradigms (*lui-même, eux-mêmes / him-same, them-same, etc...*)

(ii) *son* (*his/her/its*) as part of the expression *son propre* (*his/her/its-own*) when it is understood as inducing focus alternatives on the possessor *son* (e.g. *her own* and not *someone else's*; henceforth ‘possessor *son propre*’).

We will (i) demonstrate the relevance of (in)animacy for locality, (ii) show what the binding domain for such inanimate elements ought to be, and (iii) demonstrate that (contrary to an assumption sometimes made – see e.g. fn24) possessive and non possessive anaphors behave alike with respect to binding.

2.1 The relevance of animacy

The relevance of (in)animacy for binding locality in French can first be established by examining the behavior of **possessor** *son propre* (*her own*).¹² To guarantee this reading, e.g. *son propre* roughly meaning ‘her own and not someone else’s’, the examples will have to be read in contexts that make alternatives to the possessor salient. In most cases, explicit alternatives to the possessor will occur in the sentence itself to make this possessor reading even more salient.

We observe the following contrast:¹³

- (4) a. [Ce pont]_i dispose de son_i (propre) architecte.
 ‘[This bridge]_i has its_i (own) architect.’
 b. [Ce pont]_i a l’air très fragile. Son_i (*propre) architecte a reçu moins de moyens que les autres architectes de la région.
 ‘[This bridge]_i looks very fragile. Its_i (*own) architect got less means than the other architects of the area.’
 c. [Cet enfant]_i a l’air très perturbé. Sa_i (propre) mère passe moins de temps à la maison que les autres mères de la classe.
 ‘[This child]_i looks very disturbed. His_i (own) mother spends less time at home than the other mothers of the children in the class.’

This paradigm illustrates that inanimacy and locality of the antecedent correlate, i.e. if the antecedent is inanimate, it must locally bind *son propre*. In (4a), inanimate *ce pont* (‘this bridge’) locally binds *son propre* and the sentence is grammatical. The telling contrast is found between the ill formed (4b) and the well formed (4c). In both cases the antecedent of *son propre* is in a different clause but only the latter involves an animate antecedent.

The behavior of *elle-même* makes the same point. This element is not standardly described as a local anaphor. For instance, Zribi-Hertz (1995) assumes that *elle-même* is specific in that it is a bindable expression unspecified for locality and disjoint reference (which makes very weak predictions).

But the behavior of *elle-même* becomes unexceptional if we take into account inanimacy, as we did for *son propre*. Indeed, *elle-même* is also subject to locality if it is inanimate but not if it is animate, as illustrated by the following sentences using clausemateness:

- (5) a. [La Terre]_i tourne autour d’elle_i-(*) (même).
 ‘[The earth]_i revolves around it_i*(self).’

¹² The expression *son propre* can yield different interpretations e.g. *possessor son propre*, *possessum son propre*, etc. Only the former, characterized by its focus properties, exhibits a correlation between animacy and binding locality. A detailed discussion can be found in Charnavel (2012). Roughly, stress falls on the head noun in *possessum son propre* – which we do not discuss here, while it falls on *propre* in *possessor son propre*, which we do discuss here. The import of this correlation between stress (focus) and anaphoricity is discussed in Charnavel (2011, 2013).

¹³ As is standard, the star (*) is used contrastively: starred sentences are significantly more degraded than corresponding sentences without a star. The French data has two sources, elicitation judgments and an online magnitude estimation judgment task questionnaire statistically analyzed presented in Charnavel (2012, chapter 1, appendix).

- b. [La Terre]_i subit l'effet gravitationnel des nombreux satellites qui tournent autour d'elle_i-(**même*).
'[The earth]_i is subject to the gravitational effect of the numerous satellites that revolve around it_i(**self*).'
- c. De son point de vue, Marie_i souffre de la présence des nombreuses personnes qui tournent autour d'elle_i-(*même*).
'From her viewpoint, Mary_i suffers from the presence of many people that move around her_i(*self*).

Thus the well-formed (5a) contrasts with the ill-formed (5b) because the inanimate antecedent *la Terre* ('the earth') is in the same proposition as *elle-même* in (5a) but not in (5b). When a non-clausemate antecedent is animate as in (5c) (*Marie*), the sentence becomes acceptable.

We conclude that inanimacy and locality correlate both for possessor *son propre* and *elle-même*. These expressions thus seem to exhibit either plain or exempt behavior. Using inanimates, we can now investigate how locality should be defined.

2.2 Assessing c-command

The first defining criterion for binding is c-command: as we now show, both inanimate *son propre* and *elle-même* must be c-commanded by their antecedents. This is illustrated by the following contrast:

- (6) a. [Ce problème]_i inclut sa_i (propre) solution et celle du problème précédent.
'[This problem]_i includes its_i (own) solution and that of the previous problem.'
- b. Les annexes de [ce problème]_i incluent sa_i (**propre*) solution et celle du problème précédent.
'The appendices of [this problem]_i include its_i (**own*) solution and that of the previous problem.'

In (6a), the inanimate antecedent *ce problème* ('this problem') c-commands *sa propre* and the sentence is fully acceptable, as opposed to (6b) where the antecedent does not c-command *sa propre*.

The following example makes clear that the relevant notion is indeed c-command and not subject orientation: like (6), it exhibits a contrast with respect to c-command between (7a) and (7b), but in this case, the antecedent appears in an object position instead of a subject position.

- (7) a. J'ai lavé [la fontaine]_i avec sa_i (propre) eau par souci d'économie.
'I washed [the fountain]_i with its_i (own) water out of concern for saving water.'
- b. J'ai lavé les rebords de [la fontaine]_i avec sa_i (**propre*) eau par souci d'économie.
'I washed the edges of [the fountain] with its_i (**own*) water out of concern for saving water.'

Here *sa propre* is c-commanded by its antecedent *la fontaine* ('the fountain') occurring in the object position in (7a), but it is not in (7b), and the absence of c-command correlates with the ungrammaticality of *son propre*.

Binding of inanimate *son propre* is not subject to intervention effects, whether with animates or inanimates:

- (8) a. [Ce problème]_i amène l'étudiant_k à sa_i (propre) solution et à celle du problème précédent / à sa_k (propre) solution et non pas à celle de son voisin.
'[This problem]_i leads the student_k to its_i (own) solution and that of the previous problem/ to his_k (own) solution and not his neighbor's.'
- b. [Les fleuves]_i emportent les déchets_k vers leurs_{i/k} (propres) sources.
'[The rivers]_i sweep waste away from their_i / its_k(own) sources.'

In (8a), *sa propre* can be anteceded either by the inanimate *ce problème* ('this problem') or the intervening animate *l'étudiant* ('the student'). Similarly in (8b), *leurs propres* can be bound either by *les fleuves* ('the rivers') or by the intervening c-commander *les déchets* (pl. 'waste').

All the same points can be made with inanimate *elle-même*. First, (9) illustrates the c-command requirement:

- (9) a. [La Terre]_i tourne autour d'elle_i-(*)*même*.¹⁴
 '[The earth]_i revolves around it_i*(self).'
- b. Les satellites de [la Terre]_i tournent autour d'elle_i-(*)*même*.
 'The satellites of [the earth]_i revolve around it_i*(self).'

Elle-même can take *la Terre* ('the earth') as antecedent when it c-commands it as in (9a), but not when it does not as in (9b).

As in the case of *son propre*, there is no subject orientation involved since the same holds when the antecedent occupies the object position instead of the subject position:

- (10) a. J'ai roulé [le tapis]_i sur lui_i-(*)*même*.
 'I rolled [the carpet]_i on it_i*(self).'
- b. J'ai roulé les bords [du tapis]_i sur lui_i-(*)*même*.
 'I rolled the edges of [the carpet]_i on it_i*(self).'

Inanimate *elle-même* is not subject to intervention either: as long as the antecedent is in the local domain of *elle-même*, other elements can intervene between *elle-même* and the antecedent, whether animate and inanimate, singular or plural:

- (11) a. [La Lune]_i attire [l'eau de la Terre]_j vers elle_{ij}-*même*.
 '[The moon]_i attracts [the earth's water]_j to itself_{ij}.'
- b. [La Lune]_i attire les êtres humains/l'homme vers elle_i-*même*.
 '[The moon]_i attracts human beings/mankind to itself_i.'

In conclusion, inanimate *son propre* or *elle-même* must be syntactically bound, but need not be bound by the closest binder, nor is there a priority given to animate binders over inanimate ones. This will matter for examples showing intervention effects with subjects in section 2.3.

2.3 Calibrating binding domains

Its antecedent must not only c-command inanimate *son propre*, it must also occur in its local domain, which, as will be shown for now (we will slightly revise this in section 5.1), can be characterized as the smallest XP with an intervening subject containing it. This generalization is based on sentences involving TPs, small clauses and DPs.

First, the status of *son propre* differs in the following sentences depending on whether its antecedent occurs in the smallest TP containing it or not:

- (12) a. [Cette auberge]_i fait de l'ombre à son_i (propre) jardin et au jardin de la maison voisine.
 '[This inn]_i gives shade to its_i (own) garden and to the garden of the neighboring house.'
- b. [Cette auberge]_i bénéficie du fait que [TP son_i (*)*propre* jardin est plus spacieux que celui des auberges voisines].
 '[This inn]_i benefits from the fact that [TP its_i (*)*own* garden is more spacious than that of the neighboring inns].'
- c. [Cette auberge]_i bénéficie du fait que [TP les touristes préfèrent son_i (*)*propre* jardin à ceux des auberges voisines].
 '[This inn]_i benefits from the fact that [TP the tourists prefer its (*)*own* garden to that of the neighboring inns].'

In (12a), *son propre* and its antecedent *cette auberge* ('this inn') belong to the same TP and the sentence is natural. However in (12b) and (12c), the antecedent *cette auberge* is the subject of the main clause while *son propre* occurs in the embedded clause (subject in (12b), object in (12c)), which means that the

¹⁴ Note that the sentence with c-command of the antecedent is degraded in the absence of *même* (an effect of condition B) while a similar sentence with *son propre* is not degraded in the absence of *propre*.

antecedent is outside the smallest TP containing *son propre*, and the sentence is degraded. This shows that the local binding domain must at most be the tensed TP containing the anaphor.

This is so whatever type of proposition is involved as exemplified by the following pairs of sentences: (12) is a complement TP while (13) and (14) exhibit cases of adjunct TP and the same contrast obtains, i.e. the sentence is degraded when the antecedent does not occur in the smallest TP including *son propre*.

- (13) a. [Cette montagne]_i est moins réputée pour son_i (propre) sommet que pour le sommet voisin auquel elle donne accès.
'[This mountain]_i is less renowned for its_i (own) summit than for the neighboring summit it gives access to.'
- b. [Cette montagne]_i attire beaucoup de gens parce que son_i (*propre) sommet est l'un des sommets les plus escarpés du pays.
'[This mountain]_i attracts many people because its_i (*own) summit is one of the steepest summits in the country.'
- (14) a. [Ce problème]_i inclut sa_i (propre) solution et celle du problème précédent.
'[This problem]_i includes its_i (own) solution and that of the previous problem.'
- b. [Ce problème]_i présente peu de difficultés pour que les élèves puissent trouver sa_i (*propre) solution plus rapidement que celle des problèmes précédents.
'[This problem]_i presents few difficulties so that the students can find its_i (*own) solution more quickly than that of the previous problems.'

The same contrast obtains with non-finite TPs:

- (15) a. [Cette défaite supplémentaire]_i a entraîné ses_i propres conséquences.
'[This additional defeat]_i entailed its_i own consequences.'
- b. [Cette défaite supplémentaire]_i a poussé les habitants à supporter ses_i (*propres) conséquences en plus de celles de l'occupation.
'[This additional defeat]_i led the inhabitants to endure its_i (*own) consequences on top of those of the occupation.'

In (15b), *ses propres* occurs in an infinitival clause containing a subject (i.e. PRO controlled by *les habitants* ('the inhabitants')) while the antecedent *cette défaite supplémentaire* ('this additional defeat') is the subject of the matrix clause, i.e. is outside of the infinitival clause; in this case, the sentence is degraded, as opposed to (15a) where *ses propres* and the antecedent occur in the same TP. Also, note that this is not due to an intervention effect with the animate *les habitants* ('the inhabitants') since it has been shown in (8) that inanimate *son propre* is not subject to such intervention effects.

Similarly, the contrast in (16) shows that a small clause also constitutes a binding domain:

- (16) a. [Cette peinture]_i possède ses_i (propres) composants et des composants plus communs.
'[This paint]_i includes its_i own components and more common components.'
- b. [Cette peinture]_i a rendu les ouvriers allergiques à ses_i (*propres) composants et à ceux d'un autre type de peinture similaire.
'[This paint]_i made the workers allergic to its_i (*own) components and to those of another type of similar paint.'

In (16b), the subject of the small clause *les ouvriers* ('the workers') intervenes between *ses propres* and the antecedent *cette peinture* ('this paint') subject of the matrix clause; the sentence is degraded unlike (16a) that does not involve any small clause.

Finally, the same holds if *son propre* sits in a DP with a subject (distinct from the anaphor):¹⁵

- (17) a. [Cette entreprise]_i suscite l'admiration de son_i (propre) patron et la colère des patrons concurrents.

¹⁵ Such cases constitute a problem for Reuland's 2011 view extended to the French cases: in his view, syntactic predicates are redefined as having to have an event role (or e-role), and (some?) Ns are hypothesized not to have an event role. This problem is not manifest in Reuland (2011) as only *himself*, not *itself*, is examined. For English, it should be tested whether the antecedent must occur within the DP when *itself* appears in a DP with subject.

- ‘[This company]_i arouses the admiration of its_i (own) manager and the anger of the competing managers.’
- b. [Cette entreprise]_i suscite l'admiration des employés pour son_i (*propre) patron et leur colère contre les patrons concurrents.
‘[This company]_i arouses the admiration of the employees for its_i (*own) manager and their anger against the competing managers.’
- c. [Cette entreprise]_i suscite votre admiration pour son_i (*propre) patron et votre colère contre les patrons concurrents.
‘[This company]_i arouses your admiration for its_i (*own) manager and your anger against the competing managers.’

In (17b) and (17c), *son propre* is part of a DP with subject and its antecedent is outside this DP; in other terms, the subject of the DP *les employés* (‘the employees’) in (17b) or *votre* (‘your’) in (17c) blocks the dependence between *son propre* and its antecedent, which makes the sentence unacceptable. This contrasts with (17a) where *son propre* appears in the same DP with no intervening subject.

The non possessive anaphor *elle-même* displays the same properties suggesting that possessive and non possessive anaphors should be treated alike.

(18) shows that inanimate *elle-même* does not license an antecedent outside the smallest tensed clause it occurs in, whatever the type of clause (complement clause in (18b) and (18c), adjunct clause in (18d) and (18e) and whatever the position of *elle-même* is (subject in (18b) and (18e), object in (18c) and (18d)).¹⁶

- (18) a. [La Terre]_i tourne autour d’elle_i-(*même).
‘[The earth]_i revolves around it_i-(self).’
- b. [La Terre]_i pâtit du fait qu’elle_i-(*même) n’a pas la priorité sur les hommes.
‘[The earth]_i suffers from the fact that it_i-(self) does not get priority on humans.’
- c. [La Terre]_i subit le fait que de nombreux satellites tournent autour d’elle_i-(*même).
‘[The earth]_i suffers from the fact that many satellites revolve around it_i-(self).’
- d. [La Terre]_i connaît le phénomène des marées en partie parce que la Lune tourne autour d’elle_i-(*même).
‘[The earth]_i has tides partly because the moon revolves around it_i-(self).’
- e. [La Terre]_i est la seule planète bleue du système solaire parce que contrairement aux autres, elle_i-(*même) est dotée d’une atmosphère comportant du dioxygène et est recouverte d’eau liquide.
‘[The earth]_i is the only blue planet of the solar system because contrary to the others, it_i-(self) has an atmosphere containing dioxygen and is covered by liquid water.’

Similar judgments obtain if *elle-même* appears in an infinitival clause with its antecedent in the matrix clause. Thus in (19b), the PRO (controlled by *les invités* ‘the guests’) subject of the non-finite clause intervenes between *le tapis* (‘the carpet’) and *elle-même*; and in (19c), the subject *les hommes* (‘humans’) occurs between *elle-même* and the antecedent *la Terre* (‘the earth’). Since *elle-même* is not in principle subject to intervention as illustrated in (19), this is a question of domain.

- (19) a. [Le tapis]_i est enroulé sur lui_i-même.
‘[The carpet]_i is rolled around itself_i.’
- b. Du fait de sa beauté, [le tapis]_i n’incite pas les invités à marcher sur lui_i-(*même), mais à côté.
‘Because of its beauty, [the carpet]_i does not lead the guests to step on it_i (*self), but on the side.’
- c. [La Terre]_i ne peut pas rendre les hommes responsables d’elle_i-(*même).
‘[The earth]_i cannot make humans responsible for it(*self).’

Finally, (20a) presents the same fact as above in a DP with subject, and (20b,c) in a PP with subject.

- (20) a. [Cette loi]_i a provoqué [la colère des habitants contre elle_i-(*même) et contre ses promoteurs].

¹⁶ Note that all the deviant sentences that follow in this section would be well formed if they were minimally modified to make the antecedent a (live) person.

- '[This law]_i aroused the anger of inhabitants against it_i(*self) and its proponents.'
- b. [Cette loi]_i a provoqué [leur/notre colère contre elle_i-(*)même) et contre ses promoteurs].
'[This law]_i aroused their/our anger against it_i(*self) and its proponents.'
- c. [L'enceinte du château]_i cache les habitants derrière elle_i-(*)même).¹⁷
'[The wall of the castle]_i hides the inhabitants against it_i(*self).'

In both cases, the subject of the DP or PP *les habitants* ('the inhabitants') intervenes between *elle-même* and the antecedent, respectively *cette loi* ('this law') or *l'enceinte du château* ('the wall of the castle'). All these examples lead to the same conclusion as the sentences involving *son propre*: as we have illustrated using tensed TPs, infinitival TPs, APs and DPs, the domain relevant for anaphoricity appears to be the smallest XP with an intervening subject containing the anaphor.

2.4 Conclusion

Descriptively, the behavior of French inanimate possessor *son propre* or *elle-même* is simple. They behave like anaphors subject to the classical Condition A locality restriction in the sense that they must be bound within a local domain corresponding to the smallest XP with an intervening subject containing them.

3 Meeting Locality, Defining Exemption

We have concluded that the classical Condition A is, at least for these French anaphors, (nearly cf. section 5.1) descriptively correct. In this section we discuss the impact on this finding on theories of the distribution of anaphors, particularly theories of the distribution of the exempt/plain distinction.

Two related questions need to be answered: (i) is Condition A sufficient to explain the distribution of anaphors? And (ii) how to determine which instances of anaphoric expressions are plain and which are exempt?

3.1 Anaphor type

Many binding theories distinguish between two types of anaphors subject to different conditions: in Reinhart and Reuland's 1993 terminology SELF anaphors (such as English *itself*, etc...) are deemed to be subject to some version of Condition A, while SE anaphors (such as Dutch *zich*, Scandinavian *sig*, etc...) are often concluded not to fall under Condition A but rather, descriptively, under the Tensed S condition.¹⁸ To make sure that we are not comparing apples and oranges, we need to make reasonably sure that the French anaphors we are dealing with are of the SELF type.

There are good *a priori* grounds to conclude that *son propre* and *elle-même* are run-of-the-mill SELF anaphors on the basis of their internal make up, and, *a posteriori*, because of their distribution. Indeed, it is an extensively documented pattern (cf. König and Siemund, 2005) that, in language after language, affixing an intensifier or a focus particle to a pronoun turns it into a complex anaphor (e.g. *him* → *himself*) of the SELF type. This is what is found in French with each of the two expressions under consideration: the internal structure of *son propre* makes it similar to complex SELF anaphors in Reinhart and Reuland's 1993 or Safir's 2004 terminology: it is complex as it comprises a pronoun (*son*, just like *him* in *himself*) combined with another element (*propre*, like *self* in *himself*) whose effect is to intensify or create focal alternatives on the denotation of this pronoun (see Charnavel, 2012, chapters 1 and 2, for detailed discussion). Similarly, *elle-même* is comprised of a pronoun *elle* and the focus particle/intensifier *même* (and *elle-même*, much like English *himself*, can be used as an intensifier). Thus, from the point of view of internal makeup, both conform to a well-attested structural schema for SELF

¹⁷ Such an example suggests that Ps must have (possibly silent) syntactic subjects (as it looks like the direct object is controlling a silent subject to the PP). This is relevant to the discussion of coargumenthood in section 3.2.3. Note that such cases must, as noted by a reviewer, be distinguished from those in (8), in which the object is transparent even though it is likely to be the subject of some kind of small clause. We attribute this transparency to the incorporation of the predicate of the small clause.

¹⁸ We do not necessarily endorse this conclusion as we believe that proper controls to separate exempt SE-anaphors from non exempt SE-anaphors have not been generally conducted, with the significant exception of Huang and Liu 2001 who show that the Chinese SE anaphor *ziji* is subject to Condition A when non exempt.

anaphors: it is thus reasonable to conclude that the Condition A they must satisfy is the Condition A that constrains SELF anaphors quite generally.

3.2 Locality and Sorting out the Plain/Exempt Distinction

3.2.1 Coargument Based Condition A (CBCA)

Apart from approaches based on Chomsky 1986, the most influential theories are coargument-based theories (e.g. Pollard and Sag 1992, Reinhart and Reuland 1993, Safir 2004, Reuland 2011)¹⁹ and they come in a variety of flavors. They all share a core idea, call it the coargument based Condition A or CBCA:

(21) CBCA: a SELF anaphor must be bound by an eligible syntactic coargument (eligibility varies from theory to theory).²⁰ It is exempt iff it does not have such a coargument,

Taking Reinhart and Reuland's 1993 discussion as representative, two main cases of positions make anaphors otherwise subject to the CBCA exempt from it.²¹

First, they are exempt when they are the single syntactic argument of a predicate, in particular in DPs or PPs. This is illustrated with English reflexives in examples like the following:

(22) Lucie_i saw a picture of herself_i.

(23) Max_i rolled the carpet over himself_i.

In (22), the anaphor *herself* is the only argument of *picture*; similarly in (23), *himself* is said to be the single argument of the preposition *over*: in both the anaphor is exempt from the CBCA and lawfully not anteceded by a coargument.

Second, anaphors are exempt when they are part of an argument as in e.g. coordination:

(24) a. Max_i boasted that the queen invited Lucie and himself_i for a drink.

b. It angered him_i that she invited a man like himself_i.

Here, the anaphor is embedded in an argument: the complement of *invite* is *Lucie and himself* or *a man like himself*. As *himself* is analyzed as lacking a coargument, it is exempt from the CBCA.

3.2.2 The CBCA is too strong, or too weak

The distribution of the French inanimate anaphors we discussed makes it clear that the CBCA is too strong. For example, when *elle-même* is the single inanimate argument of a predicate, it is predicted by the CBCA to be exempt and therefore, given our conclusions, to require an animate antecedent. But this is not the case: an inanimate antecedent is well formed.

(25) a. [Cette loi]_i a entraîné la publication d'un livre sur elle_i-même et sur son auteur.

'[This law]_i led to the publication of a book about itself_i and its author.'

b. [La Grande roue]_i a éjecté les enfants au-dessus d'elle_i-même.

¹⁹ Here is what Reinhart and Reuland, 1993, p.671 say: "Syntactically, there is just one type of SELF anaphor, whose occurrence is governed solely by Condition A, as stated in (12'). This condition rules out argument SELF anaphors that occur in nonreflexive predicates" (i.e., are not co-indexed with a coargument). Similarly, Reuland, 2011, p. 83 characterizes Condition A as follows: "(A) A reflexive-marked syntactic predicate is reflexive". This means that if a predicate has a reflexive syntactic argument, the antecedent of this reflexive must be an argument of this predicate.

Pollard and Sag 1992 write p. 266: "(16) An anaphor must be coindexed with a less oblique coargument, if there is one."

²⁰ For Pollard and Sag 1992, roughly speaking any c-commanding coargument is eligible; for Reinhart and Reuland 1993, one of the coarguments must be a subject; for Reuland 2011, the predicate of the coarguments must have a event variable (see fn 26).

²¹ A third case where anaphors are exempt according to Reinhart and Reuland (1993) corresponds to focus anaphors. The PCBA is claimed to apply at LF and the focused expression undergoes movement at LF; in examples like the following in (i), the anaphor is no longer in an argument position as shown in the representation in (ii), and is therefore deemed to be exempt: (i) *This letter was addressed only to myself_i*. (ii) *myself_i* (*This letter was addressed only to e_j*). It is in fact not clear that in (i), the object needs to be focused for the sentence to be well formed. See also fn 27.

'[The big wheel]_i ejected the children above itself_i.'

Within a CBCA framework, such facts could be handled by assuming, as we do, that inanimate anaphors are never exempt. But this would now make the CBCA too weak as such anaphors are subject to a local binding restriction illustrated by the following minimally modified sentences:

- (26)a. * [Cette loi]_i est si importante que les journalistes prédisent la publication d'un livre sur elle_i-même et sur son auteur.
'*[This law]_i is so important that the journalists predict the publication of a book about itself_i and its author.'
b. * [La Grande Roue]_i a été fermée après que des enfants ont été éjectés au-dessus d'elle_i-même.
'*[The big wheel]_i has been closed after children got ejected above itself_i.'

The sentences (paralleling (23)), in which *elle-même* and the antecedent are clausemate, are grammatical, but the sentences in which they are not in the same clause, are degraded.

Within a CBCA framework, such facts may merely suggest that some additional condition is at play. Theories such as e.g. Pollard and Sag 1992, which do not include anything else than the CBCA, are thus insufficient. But proposals such as Reinhart and Reuland 1993, Safir 2004 or Reuland 2011 do include an additional condition: besides their CBCA, Reinhart and Reuland 1993 or Reuland 2011 posit a Condition on Chains which roughly enforces the existence of a "chain" minimally containing the anaphor and its (closest) antecedent. This has the effect of requiring that the distance between them be short enough to allow (in principle) for an A-movement relationship.²²

And in addition to his version of the CBCA,²³ Safir 2004 posits a local antecedent licensing condition:

Local antecedent licensing (LAL) (Safir, 2004 p. 148): an anaphor must be c-anteceded in domain D, where domain D for X is (Safir, 2004, p. 150) the minimal maximal extended projection containing X (where the verb may extend the projection of a P with a dependent complement).

This raises two questions. First the analogue to our Condition A is not the CBCA but rather the sum of these requirements (the CBCA plus the Condition on Chain or the LAL): how then do they compare? Second, what role does the CBCA play exactly in conjunction with these additional conditions: is it needed for locality? is it needed to separate plain anaphors from exempt anaphors?

Regarding the first question, it is clear that either sum is too strong: while they correctly predict the fact that inanimate possessor *son propre* must be bound locally, they wrongly disallow such cases as:

- (27) [Cette peinture]_i révèle les propriétés (de la combinaison de..) de ses_i (propres) composants et de composants plus communs.
'[This paint]_i reveals the properties of (the combination of ...) its_i own components and more common components.'

Such examples (where we can recursively embed the pronoun arbitrarily deep) are well-formed (no subject intervenes) even though (i) the domain D for the anaphor under the LAL excludes its licit antecedent (situated outside of the minimal maximal extended projection containing *ses*, at most the direct object) (ii) the distance between *ses* – the possessor of the complement of (the complement of...) the direct object – and its antecedent is not a possible A-movement relationship.²⁴

²² See Reuland 2011, chapter 3, section 3.6.2.

²³ Namely: The locally reflexive principle (LRP) (Safir, 2004, p. 108): an identity-specific anaphor (SELF-form) is dependent on its coargument antecedent if it has one.

²⁴ Reinhart and Reuland (1993) exclude possessive anaphors from their discussion (see op.cit. p. 658 fn4) but Reuland (2011 p. 167) discusses them: « Binding of poss anaphors ... can be straightforwardly accounted for by general principles of chain formation. The poss phrase is realized in the left periphery of the DP-projection, and hence in principle is accessible for chain formation with the verbal functional system, unless some other factor intervenes ... Chain formation via the extended verbal projection explains that poss anaphors are subject oriented ». Clearly the claim that chain locality holds between the anaphor and its antecedent is contradicted by (27) given that A-movement (e.g. possessor raising) is only possible for the possessor of a direct object but not for any more deeply embedded possessor. Furthermore, no subject orientation is found in French (we suspect that

We conclude that our formulation of Condition A is empirically superior.

3.2.3 The CBCA is too strong

Let us now turn to the second question regarding the role of the CBCA. Clearly, lacking an eligible coargument does not guarantee an exempt status, witness French inanimate anaphors.

But perhaps having an eligible coargument does guarantee plain status. We will show it does not.

In section 3.2.1 we merely reported how the notion of syntactic coargumenthood is applied in coargument based theories. But let us note first that the notion of syntactic coargumenthood is a complex notion not otherwise needed and not expressible in any simple way with the use of the primitive notions allowed by minimalist guidelines. Secondly, it is far from obvious how the notion of syntactic coargumenthood applies given the development of syntactic theories. Thus even for a subject (S) /direct object (DO) pair of a verb, current analyses take them not to be syntactic (or semantic) coarguments, the DO being an argument of V, S an argument of little *v* (or Voice). Note next that none of the cases discussed straightforwardly illustrates a lack of syntactic coargumenthood. In (24a), it is unclear why the conjunction *and* does not have two syntactic arguments, one of them a syntactic subject. In (24b), it is assumed that the element *like* is not an argument taking predicate (with subject). But the natural assumption is that *like* has a subject and *man like himself* is a relative (possibly head internal, so that *like* has two arguments, *himself* and the subject *man*). Similarly, it is unclear why a preposition like *over*, a two-place predicate, does not have a (silent) subject, especially given examples in (20c) (see also fn17) showing that prepositions do project syntactic subjects.

Inversely, cases that must be claimed to involve coargumenthood with a subject to prevent exemption do so on dubious grounds. Thus, possessive constructions such as *his picture of himself/him*, with *his* a non agent possessor are claimed by Pollard and Sag, 1992 or Reinhart and Reuland, 1993 to involve coargumenthood (whether syntactic or semantic) between *himself* and *his*. This is at best controversial: more plausibly, *his* is a coargument of *picture of himself / him* under a possessive/locative relation (see e.g. Kayne, 1993 or den Dikken, 1998) and *him/himself* lacks a coargument. Similarly a sentence such as (i) *John_k seemed to himself to t_k hurt himself* claimed to involve a non exempt reflexive in the main clause, requires taking *John* to be an argument and a subject of *seem* even though *John* is neither (it is the subject of T, not of *seem*).²⁵ Appeal to syntactic coargumenthood to predict exemption thus appears to be based on shaky grounds.

Secondly, although it is cumbersome to show this in detail, it should be reasonably clear that, in terms of locality restriction, the Condition on Chain or the LAL (or our Condition A) is more permissive than the CBCA. This is because movement or the LAL in principle allows dependencies between say a subject and a non coargument position, even if this subject has a coargument (as e.g. in *He will [t like soup]*, where *he* can move even though *he* and *soup* are coarguments, or in possessor raising cases).

When a (non subject) anaphor A with a c-commanding argument B is involved, these two conditions and the CBCA are equivalent. For the Condition on Chain, this is because – in minimalist terms – B will act as an intervener for an external probe trying to reach A. For the LAL, the minimal maximal extended projection containing A does not contain non-coarguments of A or B in the configuration under discussion (it may with prepositions).

Finally, a subject anaphor A c-commanding a coargument B is predicted ill-formed by the CBCA approaches, but this prediction is incorrect (regardless of how eligibility is defined). First this is shown e.g. by the well known Chinese cases (see Huang and Liu, 2001) in which a plain SELF anaphor (*ta-ziji* / lit. ‘*him-self*’) subject of a verb can take an antecedent outside of its clause. In French, it is shown by the examples in (17) (see also fn 15).

Reuland’s discussion may more correctly apply to SE poss anaphors, which are subject oriented, but crucially not to SELF poss anaphors).

²⁵ Note that Reuland (2011) does not have these particular problems as he takes eligible coarguments to be arguments of a predicate with an event variable. Example (i) of the text suggests that coargumenthood in fact plays no role. In addition, *John* needs to count as an argument of *hurt* given the embedded reflexive object. Given Hartman’s (2009) analysis of *tough-movement* constructions, pairs such as *He believes himself_k to be tough for him_k to trust t_k / She believes herself_k to be tough for him to trust t_k* pose a problem. In the former, the reflexive ought to count as a coargument of *trust* via its trace, which seems incompatible with the wellformedness of the second.

This means that either the CBCA is not needed in such cases, as it is redundant with the needed second condition, or it is too strong to predict the behavior of inanimate anaphors.

In addition, the behavior of animate *son propre* and *elle-même* provides straightforward arguments that having an eligible coargument does not guarantee plain status.

First, assuming (wrongly it seems to us but as needed by some versions of the CBCA)²⁶ that animate *son* and *Jean* in (28) are coarguments predicts that *son* cannot be coindexed with anything other than its coargument. This is contradicted by the well-formedness of (28):²⁷

- (28) Marie_i a vendu son_i propre portrait de Jean_k.
'Mary_i sold her_i own picture of John_k.'

Next, consider:

- (29) a. Marie_i s'inquiète souvent du fait que ses enfants dépendent d'elle_i-même.
'Mary_i is often worried that her children depend on herself_i.'
b. [L'avenir de Marie_i]_k ne dépend pas d'elle-même_i, mais de ses parents.
'[Mary_i's future] does not depend on herself_i, but on her parents.'
- (30) a. Marie_i s'inquiète souvent du fait que ses enfants se fient à elle_i-même.
'Mary_i is often worried that her children trust herself_i.'
b. [Les voisins de Marie_i]_k ne se fient pas à elle-même_i, mais à ses parents.
'[Mary_i's neighbors] do not trust herself_i, but her parents.'
- (31) a. Marie_i pensait que ses enfants avaient honte d'elle_i-même.
'Mary_i thought that her children were ashamed of herself_i.'
b. [Les parents de Marie_i]_k n'ont pas honte d'elle-même_i, mais de ses amis.
'[Mary_i's parents] are not ashamed of herself_i, but of her friends.'
- (32) a. Marie_i se demande si ses collaborateurs sont fiers d'elle_i-même.
'Mary_i wonders if her co-workers are proud of herself_i.'
b. [Les collaborateurs de Marie_i]_k ne sont pas fiers d'elle-même_i, mais de ses parents.
'[Mary_i's co-workers] are not proud of herself_i, but of her parents.'

In these examples, under the CBCA, *elle-même* must be considered a syntactic co-argument of the subject of e.g. the verb *dépendre de* ('depend on') or *se fier à* ('trust') or of the adjective *fier* ('proud') as must all dependents of verbs or adjectives mediated by weak prepositions. Otherwise, the CBCA would wrongly predict (e.g. in English) that objects of weak prepositions (e.g. indirect objects, genitives, objects of *on* in *depend on* etc..) should always be exempt. That such prepositions are weak is evidenced by the fact that they can disappear without meaning loss under derivational processes (cf. *se fier à* ('trust') → *fiable* ('trustworthy'), incorporation (cf. *dépendant de* ('dependent on') → *auto-dépendant* ('self dependent'))...

It would seem then that lacking an eligible coargument does not guarantee an exempt status, witness French inanimate anaphors. And having an eligible coargument does not guarantee plain status, witness the animate anaphors above.²⁸

²⁶ This excludes Reuland (2011). Unclear in Reuland (2011) is whether all nominal predicates lack an event role. In particular, event nominalizations (in Grimshaw's 1992 sense) may have an event role.

²⁷ Supposing that the anaphor is a focused anaphor, which Reinhart and Reuland (1993) propose is exempt would be too permissive: it would wrongly predict that *son propre* should always be exemptable from Condition A, even when inanimate.

²⁸ Supposing that *elle-même* is a focused anaphor in (29)-(33) would correctly predict it to be exempt under the CBCA theory (see fn 21) and the sentence to be grammatical. This can be controlled for. For example, (i) is perfectly well formed as an answer to the question '*Quand Marie_i s'inquiète-t-elle du fait que ses enfants dépendent d'elle_i-même?*' (When is Mary_i worried that her children depend on herself_i?)' where the focus both of the question and of the answer is on the temporal adjunct and answered by *souvent* ('often') and not *elle-même*. Furthermore, if focus was at play, inanimate *elle-même* should be able to behave the same, but this is not borne out:

i. [La Terre]_i est dégradée par les êtres humains même si leur avenir ne dépend que d'elle_i-(*même).
'[The earth]_i is degraded by human beings even if their future only depends on it_i(*self).'

ii. Les habitants de [la Terre]_i dépendent d'elle_i-(*même).
'The inhabitants of [the earth]_i depend on it_i(*self).'

3.2.4 Residual Coargumenthood Dependence?

Given the above discussion, the simplest conclusion we could draw is that coargumenthood in general and the CBCA in particular can't be appealed to in order to constrain anaphora (at least in French). Concomitantly, the simplest algorithm separating plain from exempt anaphors is no algorithm at all beyond requiring what content exempt anaphors must have: they must have an antecedent with the right kind of intrinsic content and discourse role (why has not been established, but see Charnavel, 2014 for a proposal). If such an antecedent is available, it can serve as antecedent without any regard to the particular position occupied by the anaphor (there may of course be other constraints that a theory of exempt anaphora would have to deal with). If no such antecedent is available, the anaphor is plain and subject to Condition A.²⁹

Adopting this null hypothesis looks incorrect as shown by the following minimal pair:

- (33) a. Marie_i s'inquiète souvent du fait que ses enfants dépendent d'elle_i-même.
 'Mary_i is often worried that her children depend on herself_i.'
 b. * Marie_i s'inquiète souvent du fait que ses enfants évitent elle_i-même.
 'Mary_i is often worried that her children avoid herself_i.'

The ill-formedness of the second example is unexpected as the antecedent is identical in all relevant respects to that found in the first example, which, obviously, meets the relevant requirements for anteceding an exempt anaphor, whatever these requirements may be.

The following pair shows that the deviance of (33b) has nothing to do with anaphora.

- (34) a. * Jean_i pense que Marie examinera lui_i-même.
 'John_i thinks that Marie will examine himself_i.'
 b. * Jean_i examinera lui_i-même / * Le ressort_i contracte lui_i-même
 'John will examine himself.' / 'The spring contracts itself.'

Indeed, even if *lui-même* is locally bound, the sentence remains unacceptable (regardless of animacy): in particular requiring a coargument binder is not the relevant factor (as the contrast between the French examples and the English glosses also shows). What then excludes French examples like (33b)?

We believe the answer to this question falls under a generalization extensively discussed and justified in Cardinaletti and Starke (1999) with very broad crosslinguistic relevance (Romance, Germanic, Slavic are discussed, many other languages are mentioned) and not category specific (pronouns and adverbs are discussed). This generalization is unrelated to binding theory. It can descriptively be stated as: all else (relevant) equal, if a weaker form of the target element is available, it must be used (and thus blocks the use of a stronger form).³⁰ In the present instance, all else equal, an available pronominal clitic (reflexive, accusative or dative) should block the use of bare *elle(-même)*: the French data conforms exactly to the prediction made by Cardinaletti and Starke's proposal.

First, the unacceptability of *lui-même* (read without narrow focus / contrast on *lui-même*) in simple clauses correlates with the acceptability of the reflexive clitic *se* in the a/b pairs.

- (35) a. * Jean_i examinera lui_i-même. b. Jean_i se_i examinera.³¹
 'John_i will examine himself_i.' 'John_i will examine himself_i.'
- (36) a. ??Jean_i décrit le paysage à lui_i-même. b. Jean_i se_i décrit le paysage.
 'John_i describes the landscape to himself_i.' 'John_i describes the landscape to himself_i.'

Both sentences (with *même*) are degraded (locality violation in (i), c-command violation in (ii)).

²⁹ In principle, we should be able to observe Condition A effects with an animate anaphor when no suitable antecedent is available. In the absence of an explicit theory of exempt anaphora, it is difficult to illustrate such a case and justify it. However, here is an example, which contrasts with example (33a): **Marie dit de Jean que ses collaborateurs sont fiers de lui-même* / *Mary says of John that his coworkers are proud of himself*, as *Jean* is a not suitable antecedent (not a logophoric center). See Charnavel, 2014 for further discussion.

³⁰ More precisely, a weaker form excludes a stronger form if the latter is more specified than the former. This is why French clitic *le* or *lui* excludes strong *lui*, but clitics *en/y* – analyzed as prepositional clitics, see e.g. Kayne, 1975 – do not (as *en* and *y* incorporate Case information that the strong pronouns do not).

³¹ We say that *se* stands for an argument and use an index on it to facilitate presentation, without any claims about its actual role.

- (37) a. Marie_i dépend d'elle_i-même.
'Mary_i depends on herself_i'
- b. * Marie_i se_i dépend.
'Mary_i depends on herself_i'
- (38) a. Marie a présenté Jean_i à lui_i-même_i.
'Mary introduced John_i to himself_i.'
- b. Marie_k s_{*i/k}'est présenté Jean_i.
'Mary_k introduced John_i to himself_i/herself_k'
- (39) a. Jean_i a été assigné à lui_i-même.
'John_i has been assigned to himself_i.'
- b. * Jean_i s_i'a été assigné.
'John_i has been assigned to himself_i.'

Taking *se* to be the missing argument, it is well known that it can only stand for a dative or an accusative object, it must be deep subject oriented, and is incompatible with passive voice (see, e.g. Sportiche, 2014, for recent discussion and references). In all such simple clause cases (the a/b pairs), *se* and *lui-même* are in complementary distribution. *Se* can stand for a direct object with subject antecedent (35a/b), or an indirect object with subject antecedent (36a/b): in such cases, *lui-même* is excluded. *Se* is unavailable with other complements (37a/b), with an indirect object with non subject antecedent (38a/b) or in the presence of passive voice (39a/b): in all such cases *lui-même* is perfectly acceptable.

In such cases, *lui-même* is in competition with the pronominal clitic *se*: by Cardinaletti and Starke's generalization, only if *se* is not allowed to occur is *lui-même* allowed by itself.³² This type of competition is not limited to anaphors such as *lui-même*: as Cardinaletti and Starke (1999) discuss in detail (see also Zribi-Hertz (2000) for related considerations in French), this type of competition is also found with strong pronouns such as *lui* (*him*) (once again without contrastive or deictic accent on it) and their clitic counterpart such as *le* (*him*):

- (40) *a. Jean_i examinera lui_q.
'John_i will examine him_q.'
- b. Jean_i l_q'examinera.
'John_i will examine him_q.'
- (41) a. ??Jean_i décrit le paysage à lui_q.
'John_i describes the landscape to him_q.'
- b. Jean_i lui_q décrit le paysage.
'John_i describes the landscape to him_q.'
- (42) a. Marie_i dépend d'elle_q.³³
'Mary_i depends on her_q'
- b. * Marie_i lui_q dépend.
'Mary_i depends on her_q'
- (43) a. * Marie a présenté Jean_i à lui_p.
'Mary introduced John_i to him_p.'
- b. Marie_k lui_p a présenté Jean_i.
'Mary_k introduced John_i to him_p.'
- (44) a. * Jean_i a été assigné à lui_p.
'John_i has been assigned to him_p.'
- b. Jean_i lui_p a été assigné.
'John_i has been assigned to him_p.'

This pattern of competition is duplicated exactly with exempt anaphor cases where *lui-même* has an antecedent in a different clause.³⁴

- (45) a. * Jean_i pense que Marie examinera lui_i-même.
'John_i thinks that Marie will examine himself_i.'
- b. Jean_i pense que Marie l_i'examinera.
'John_i thinks that Marie will examine him_i.'

³² When *se* is available, *elle-même* can also be acceptable if it is added to *se*; this gives rise to focusing of the reflexivized object (and irrelevantly can also yield an exclusive reading of the subject in (i) like emphatic *himself* can do): (i) Jean_i s_i'examinera lui_i-même/ 'John_i will examine HIMSELF_i.' This is compatible, in fact predicted, by Cardinaletti and Starke's proposal.

(ii) Jean_i se_i décrit le paysage à lui_i-même / 'John_i describes the landscape to HIMSELF_i.

³³ Note that the strong pronoun is not in competition with the prepositional (cf. Kayne, 1975) clitic *en* (*of it/ of her*) even though Marie_i en_{qq} dépend can be synonymous with (42a).

³⁴ As expected, this is true even if the antecedent is not a subject, e.g. (i) ??Marie a informé Jean_i qu'on présenterait Suzanne à lui_i-même/ 'Mary informed John_i that one would introduce Susan to himself_i.' (ii) ??Marie a informé Jean_i qu'on lui_i présenterait Suzanne / 'Mary informed John_i that one would introduce Susan to him_i.'

- (46) a. ??Jean_i pense que Marie décrit le paysage à lui_i-même
 ‘John_i thinks that Marie describes the landscape to himself_i.’
 b. Jean_i pense que Marie lui_i décrit le paysage.
 ‘John_i thinks that Marie describes the landscape to him_i.’
- (47) a. Marie_i s’inquiète du fait que ses enfants dépendent d’elle_i-même.
 ‘Mary_i is worried that her children depend on herself_i.’
 b. * Marie_i s’inquiète du fait que ses enfants la_i dépendent.
 ‘Mary_i is worried that her children depend on her_i.’
- (48) a. ??Jean_i pense que Marie a présenté Suzanne à lui_i-même.
 ‘John_i thinks that Marie introduced Susan to himself_i.’
 b. Jean_i pense que Marie lui_i a présenté Suzanne.
 ‘John_i thinks that Marie introduced Susan to him_i.’
- (49) a. ??Jean_i pense que Marie a été assignée à lui_i-même.
 ‘John_i thinks that Marie has been assigned to himself_i.’
 b. Jean_i pense que Marie lui_i a été assignée.
 ‘John_i thinks that Marie has been assigned to himself_i.’

Note that this pattern cuts across the direct object/ prepositional object distinction: PP objects with a weak preposition (e.g. indirect objects) that cliticize as pronominal clitics are excluded.

The pattern tracks the availability of pronominal clitics in the non-verbal domain too. Thus all of the following sentences are fine since the pronouns cannot be replaced by a weak pronominal clitic.

- (50) a. Jean_i est fier de lui_i / lui_i-même.
 ‘John_i is proud of himself_i.’
 b. Jean_i a vendu des photos de lui_i / lui_i-même.
 ‘John_i sold pictures of himself_i.’

Finally, note that as expected under Cardinaletti and Starke’s view, all the excluded examples with either *elle* or *elle-même* improve if the pronouns are deictic or focused (and thus not in competition with weak forms which are neither):

- (51) (?) Jean_i pense que Marie examinera LUI_i(-MÊME).
 ‘John_i thinks that Marie will examine HIM_i(SELF).’

We conclude that nothing about anaphora is involved in the exclusion of examples such as (33b) and that coargumenthood is not involved.

3.2.5 English

Obviously, it would be desirable to extend our conclusions to English (and all other languages) but we are not in a position to do so simply because not enough is known. We outline why briefly (as a full discussion is beyond the scope of this article).

First, poorly understood variation is reported among English dialects. Thus, example (3b) (the equivalent to the French example (33b)) is standardly reported to be robustly ill-formed in American English (the actual picture we gathered from our American students is actually much more nuanced), but well-formed in British English (cf. Zribi Hertz, 1989, Pollard, 2005). This may be related to the second point.

Second, according to Reinhart and Reuland 1993, narrow focus accent on the anaphor in (3b) makes the sentence well-formed: this is surprisingly similar to the French fact in (51). This may be related to the third point.

Third, as Ahn (2012, 2014) discusses extensively, in English locally bound subject oriented reflexives

(that are in a possible movement relationship with the subject position)³⁵, or pronouns in the same positions cannot bear normal phrasal accent and must instead be deaccented. Thus *John cut himself/him* with normal stress on the reflexive or pronoun can't be answers to questions such as *What happened?* This suggests that English may after all have weak/strong distinctions relevant for the Cardinaletti and Starke's generalization, thus interfering with anaphoric dependencies in the same way as in French. Ahn (2012, 2014) shows that deaccented reflexives (which must be subject oriented) should be analyzed exactly like French reflexive *se*. This would immediately explain why (subject oriented) object reflexives cannot be exempt (the same competition as in French), except when the reflexive is narrowly focused (as in the French cases in (51)).³⁶ This is also related to the fourth point.

Fourth, non subject oriented reflexives can be stressed under normal phrasal accent (*What happened?* can be answered by *John showed Mary herself* with main stress on the reflexive). In addition, they seem to be able to be exempt in ways subject oriented reflexives can't. Thus Ahn (2012, 2014) reports the following contrastive judgments:

- (52) a. John_i showed Mary himself_i / *Bill_i thinks John_j showed you themselves_{i+j}
 b. John_i showed Bill_j themselves_{i+j} / John_i thinks you showed Bill_j themselves_{i+j}

As there are good grounds (see section 4.2 below) to conclude that the possibility of split antecedence is a diagnostic for exempt status, these sentences run counter what has been standardly assumed regarding exemptability, and show both that coargumenthood simply cannot be at play in defining non exempt status, and that a better overall assessment of the English facts is needed.

4 When is inclusive reference possible (corroborating the plain/exempt dichotomy)

Lebeaux (1984) discusses what have become classical diagnostics for plain anaphor/antecedent relations, namely c-command, split antecedence, strict/sloppy reading in ellipsis and pronoun/anaphor complementarity. As Hicks (2009, pp.135-166) shows, none of these classical diagnostics clearly separates what (he and many others assume to be) plain and exempt anaphors (within a CBCA approach). But it is important to know what properties plain (or exempt) anaphors must have, in order to properly constrain theories of their behavior. In this section, we try to settle some of these questions for French by controlling for the plain/exempt distinction.³⁷ In particular, we discuss two questions:

1. Has independent evidence been convincingly adduced corroborating the dichotomy between plain and exempt anaphors defended by CBCA theories?
2. Is there in fact independent evidence corroborating the dichotomy between plain and exempt anaphors as we define it?

We will answer the first question negatively (section 4.1) and the second one positively (section 4.2).

4.1 Non correlations

Let us ask what the plain/exempt dichotomy corroborates with in CBCA theories. Different versions make different claims. For Pollard and Sag (1992), positions allowing plain anaphors disallow pronouns with the same antecedents. For Reinhart and Reuland (1993), plain anaphors must be semantically bound (that is must be interpreted as bound variables) while exempt anaphors do not have to. Neither of these correlations holds, as we now show.

First, there is no overall complementarity between plain anaphors and pronouns. This can be seen in two ways, both of them well known. We would expect that in a context in which a pronoun has coarguments and cannot take one of them as antecedent, a plain anaphor with that antecedent should be allowed. But this is incorrect as the following example shows:

³⁵ As Ahn (2014) shows, this cuts across the CBCA defined plain/exempt distinction, excluding those in (24).

³⁶ Crucially, Ahn (2014) shows that deaccenting of reflexives works differently from deaccenting of pronouns.

³⁷ The only case we know of where there is a proper attempt is Fox and Nissenbaum, 2004, section 3, who, discussing examples involving animate reflexives in English, conclude that the facts they discuss would follow if the reflexives were either subject to Condition A, or exempt from it, a conclusion very much along the lines of what we conclude for French. If they are right, binding Condition A theories must be thoroughly revised for English, hopefully along the lines that we suggest for French (as hinted at in section 3.2.5).

(53) *John and Mary like him/himself.

Here, neither *him* nor *himself* (which is a plain anaphor in the CBCA view, having the subject as coargument) is allowed with *John* as antecedent. This suggests that syntactic coargumenthood is not sufficient to explain the joint distribution of pronouns and plain anaphors.³⁸

Conversely, there are simple cases in which plain anaphors as per the CBCA occur in the same position as pronouns (and with the same antecedent):³⁹

- (54) a. Jean parle de lui/ lui-même /*John is speaking of him/himself*
 b. Jean est fier de lui/ lui-même /*John is proud of him/himself*

Here both the pronoun and the anaphor are allowed, with no necessary focus difference.⁴⁰

Similarly, unlike what is claimed in Reinhart and Reuland (1993, p. 673 ff), it is unclear whether plain anaphors must be semantically bound, that is, interpreted as bound variables. Thus both English sentences below allow strict and sloppy readings, readily for the first one (see e.g. Hestvik, 1995, Kehler, 2005), for many speakers for the second (see e.g. Buring, 2005, p. 141):

- (55) John_i defended himself_i before Bill did.
 = ... before Bill defended himself (sloppy)
 = ... before Bill defended him (strict)
- (56) Only John_i finds himself_i intelligent.
 = Only John_i λx (x finds x intelligent) (sloppy)
 = Only John_i λx (x finds John intelligent) (strict)

The availability of such strict readings reveals that these plain anaphors do not have to be interpreted as bound variables: they may well be required to be syntactically bound, but not semantically bound.⁴¹

4.2 Inclusive reference

We now show that the plain/exempt dichotomy we propose does correlate with the (im)possibility of inclusive reference unlike the dichotomy CBCA theories propose.

Inclusive reference are cases of non exhaustive binding where the reference of an anaphor is strictly included in (cf. partial binding) or strictly includes (cf. split antecedent) the reference of an antecedent (cf. a.o. Lasnik: 1989; Den Dikken et al.: 2001). Exempt anaphors are typically assumed (correctly so in our view) to allow non-exhaustive binding. Apart from Hicks (2009), it has also long been assumed that syntactic binding imposed by (any version of) Condition A is interpreted as referential identity,⁴² either through coreference or semantic binding (the choice being regulated by Reinhart and Grodzinsky's 1993 rule I – or some descendant of it, see e.g. Roelofsen, 2010).

Inclusive reference is a particularly interesting criterion because there is no reason, other than formal, why it should be allowed or disallowed. In particular, constraints on what can act as the antecedent of a plain anaphor should be irrelevant since they impose no interpretive constraints on the content of this antecedent.

³⁸ An observation exploited by Reinhart and Reuland (1993) or Reuland (2011) who take the distribution of pronouns to be sensitive to semantic coargumenthood, unlike that of plain anaphors which are sensitive to syntactic coargumenthood.

³⁹ Reinhart and Reuland (1993) provide other cases. See also Hicks (2009, pp.135-166).

⁴⁰ It may well be that complementary distribution, hence some kind of competition approach (cf. e.g. Safir, 2004) is right once meaning is taken into account, but it can't be based purely on position. It may also be that plain anaphors as we define them are in complementary distribution with pronouns. We leave this open here (deciding is difficult due to various confounding factors) but it would be relevant for the treatment of condition B.

⁴¹ This assumes the standard view (adopted in Reinhart and Reuland, 1993) that if reflexives are semantically bound, only a sloppy reading is available. As a reviewer points out, this standard view may be false. In such a case, ellipsis provides no argument that reflexives must be semantically bound.

⁴² Identity must be understood in the right way to account for binding by non referential expressions and also modulo proxy interpretation viz. Jackendoff's 1992 Madame Tussaud cases. This extends to reciprocal expressions for which referential identity is also required in the following sense: in e.g. *they like each other*, which we take means roughly: *Each of them likes an other of them*, the sets over which *each* and *other* range, namely *them* must be identical to $\|they\|$, where *they* is the antecedent of the reciprocal.

The most interesting cases are cases in which theories differ regarding the plain/exempt dichotomy. The parameters of the problem are: (i) the question whether an anaphor is predicted to be exempt either by CBCA theories or by our classical based approach (four possibilities); (ii) two types of inclusive reference; (iii) choice of *son propre* and *elle-même*. Given that both of them behave the same and that both types of inclusive reference also behave the same, here are the findings:

	Exempt CBCA	Exempt Classical	Inclusive Reference Observed	Examples
1	Y	Y	Possible	Non coargumental animates
2	Y	N	Not possible	Non coargumental inanimates
3	N	Y	Possible	Coargumental animates
4	N	N	Not possible	Coargumental inanimates

The following pattern shows that both hypotheses are right in uncontroversial cases of plain/exempt distinction, that is illustrates lines 1 and 4 of the table above:

- (57) a. Jean_i a dit à Pierre_m que personne d'autre qu'eux-mêmes_{i+m} ne devrait faire ça.
John_i told Bill_m that no one but themselves_{i+m} should do this.
- b. Ce décret_i détourne la loi_m de lui-même_i/ d'elle-même_m/ *d'eux-mêmes_{i+m}.
This decree diverts the law from itself/ from themselves_{i+m}.
- c. Jean_i et Marie pensaient que personne d'autre que lui-même_i ne devrait faire ça.
[John_i and Mary]_m thought that no one but himself_i should do this.
- d. [La terre et le soleil]_m dépendent d'eux-mêmes_m/*de lui-même_i pour leur énergie.
The earth and the sun rely on themselves/ itself for their energy.

(57a) and (57b) are instances of split antecedence: the reference of *eux-mêmes* (*themselves*) is the sum of the reference of the two antecedents *John* and *Bill* in (57a) and *the decree and the law* in (57b). Thus *eux-mêmes* (*themselves*) is not coindexed with any syntactic coargument in (57a). Since it does not have any eligible coargument (it is a subpart of an argument of *faire*), *themselves* is exempt under CBCA theories and ours too since it is animate. In (57b), *eux-mêmes* (*themselves*) is inanimate: therefore it cannot be exempt (under any theory: for CBCA theories because it is in (verbal) coargumental position; for us because it is inanimate). However, it is not locally bound as required by Condition A or by CBCA theories. Exactly the same obtains, *mutatis mutandis* for (57c) and (57d) with partial binding.

On controversial cases (lines 2 and 3), the possibility of strict inclusive reference correlates with our version of (non)-exemption: inanimates require exhaustive binding; animates which can freely be exempt do not. This is illustrated below for inanimate *son propre* first when it is the only argument of the nominal predicate it combines with:

- (58) a. [Context: The school has a garden, but the teachers' houses do not]
L'école_i et les maisons des instituteurs font de l'ombre à son_i (*propre) jardin, mais pas au jardin de la mairie.
'The school_i and the teachers' houses give shade to its_i (*own) garden, not to the garden of the town hall.'
[||son propre|| ⊂ ||antecedent||]
- b. [Context: The school and the teachers' houses have a common garden.]
L'école_i fait de l'ombre à leur_{i+m} (*propre) jardin, mais pas au jardin de la mairie.
'The school_i gives shade to their_{i+m} (*own) garden, not to the garden of the town hall.'
[||antecedent|| ⊂ ||son propre||]
- c. [Context: The school and the teachers' houses have each a garden.]
L'école_i fait de l'ombre à leurs_{i+m} (*propres) jardins, mais pas au jardin de la mairie.
'The school_i gives shade to their_{i+m} (*own) gardens, not to the garden of the town hall.'
[||antecedent|| ⊂ ||son propre||]

In all (58a,b,c) involving inclusive reference, *son propre* is predicted to be exempt by the coargument view since it does not have any coargument. But in none of them is partial reference as in (58a) or split

antecedence as in (58b) and (58c) acceptable. Once again, the animacy dimension plays a crucial role. If we modify the sentences in (58) to make the anaphor animate, inclusive reference becomes possible again:

- (59)a. *[Context: The mayor has a garden, but the teachers do not]*
 Le maire_i et les institutrices s'occupent de son_i (propre) jardin, et non pas de celui des institutrices.
 'The (he-)mayor_i and the (she-)teacher take care of his_i (own) garden, and not of the teacher's.' $[\|son\ propre\| \subset \|antecedent\|]$
- b. *[Context: The mayor and the teachers have a common garden.]*
 Le maire_i s'occupe de leur_{i+m} (propre) jardin, et non du jardin du pompier.
 'The mayor_i takes care of their_{i+m} (own) garden, and not of the fireman's.' $[\|antecedent\| \subset \|son\ propre\|]$
- c. *[Context: The mayor and the teacher each have a garden.]*
 Le maire_i s'occupe de leurs_{i+m} (propres) jardins, et non pas du jardin du pompier.
 'The mayor_i takes care of their_{i+m} (own) gardens, and not of the fireman's.' $[\|antecedent\| \subset \|son\ propre\|]$

The same pattern is found with *elle-même*. In each of the following cases, illustrating what we take to be non-exempt positions, an inanimate cannot be partially bound - (60a) - or allow split antecedents - (60b):

- (60) a. * L'école_i et le musée ont fait imprimer des photos d'elle-même_i.
 'The school_i and the museum had pictures of itself_i printed.' $[\|elle-même\| \subset \|antecedent\|]$
- b. * Le musée_i a fait imprimer des photos d'eux-mêmes_{i+m}.
 'The museum_i had pictures of themselves_{i+m} printed' $[\|antecedent\| \subset \|eux-mêmes\|]$

But selecting animate antecedents makes such cases fine:

- (61) a. Marie_i et son fils ont fait imprimer des photos d'elle-même_i.
 'Marie_i and her son John had pictures of herself_i printed.' $[\|elle-même\| \subset \|antecedent\|]$
- b. Jean_i a fait imprimer des photos d'eux-mêmes_{i+m}.
 'John_i had pictures of themselves_{i+m} printed.' $[\|antecedent\| \subset \|eux-mêmes\|]$

In sum, exempt anaphors do not have to be exhaustively bound by a unique antecedent but plain anaphors must indeed be: this should follow from the right theory of Condition A (see section 5.4.3).

5 Fine tuning Condition A and deriving it

The previous argumentation concludes that the classical Condition A is basically the correct generalization (in French) regulating the distribution of plain anaphors. We now turn first to the question of how precisely to formulate Condition A and next how its effects could be derived from more basic theoretical principles.

We will first conclude that Chomsky's (1986) formulation should be amended to disallow a plain anaphor from taking an antecedent outside a tensed TP containing it. Secondly, examining the properties of the antecedent/plain anaphor binding relations, we will conclude that the best strategy to attempt to reduce Condition A to more primitive conditions is to reduce it to Phase theory, but not via Binding as a derivationally set up Agree relation as many have proposed (e.g. Hicks, 2009), and we will examine what this entails for Phase theory.

5.1 Fine tuning Condition A

Taking into account the plain/exempt distinction, we only deal with plain anaphors in this section, which we will systematically illustrate with inanimate anaphors.

We can paraphrase Chomsky's 1986 formulation of Condition A as "a plain anaphor must be bound within the smallest complete functional complex containing a structural binder for the anaphor".

A complete functional complex is understood to be some phrasal projection only containing saturated predicates (that is predicates with all of their arguments). Given the predicate internal subject hypothesis and trace theory, a complete functional complex for some predicate *p* is simply going to be the maximal projection of *p*. Given furthermore that the binding domain for an anaphor must contain a binder for the anaphor, this formulation is equivalent to requiring that “a plain anaphor must be bound within the smallest XP containing a structural binder for the anaphor”.

It is easy to see that if the anaphor is not the highest, or included in the highest, projected argument of some *X*, *XP*, the maximal projection of *X* will be its binding domain.

By definition, the subject of an *XP* is the highest argument of that *XP* (if this *XP* has a subject). It follows that if an *XP* has a subject which is not or does not contain a plain anaphor, this plain anaphor in *XP* will have to be bound within this *XP*. In other words, as we have been assuming so far, and demonstrated to be the case in all instances which we have discussed, a subject cannot intervene between a plain anaphor and its antecedent.

If however the plain anaphor is the highest, or part of the highest, projected argument of some head *X*, *XP*, the maximal projection of *X* will not be its binding domain, since *XP* will not, by assumption, contain a binder for the anaphor. In that case the binding domain will be the smallest *YP* containing *XP* and a binder for the anaphor.

Putting all together, this comes down to requiring that an anaphor and its antecedent be in the smallest *XP* containing both without a subject intervening between them.

Illustrating the major cases with English sentences (ignoring exemption here for simplicity of exposition, that's why animates are used) and reflexive anaphors where possible (reciprocals otherwise), here is the major pattern predicted for plain anaphors:

(62)

- | | | |
|----|---|---------------------------------|
| a. | DP _k ...[VP DP _m see herself _{m,*k}] | object of simple VP |
| b. | DP _k ...[VP DP _m see [DP a picture of herself _{m,*k}]] | object of DP w/o subject |
| c. | DP _k ...[DP DP _m 's picture of herself _{m,*k}] | object of DP w subject |
| d. | DP _k ...[VP DP _m see [DP each other _{m,*k} 's pictures]] | subject of DP |
| e. | DP _k ...[VP DP _m find [AP herself _{m,*k} proud of it]] | subject of small clause |
| f. | ... [VP DP _k find [AP DP _m proud of herself _{m,*k}]] | object of small clause |
| g. | ... [VP DP _k believe [XP DP _m to know herself _{m,*k}]] | object of complement clause |
| h. | DP _k ...[VP DP _m believe [XP herself _{m,*k} to know Bill]] | subject of ECM clause |
| i. | DP _k ...[VP DP _m believe [XP a picture of herself _{m,*k} to show ...]] | inside subject of ECM clause |
| j. | DP _k ...[VP DP _m believe that [TP herself _{m,*k} knows Bill]] | subject of tensed clause |
| k. | DP _k ...[VP DP _m believe that [TP a picture of herself _{m,*k} shows ...]] | inside subject of tensed clause |

We have discussed most of the corresponding cases in French with inanimate, that is plain, anaphors. They conform exactly to this pattern with two exceptions: such cases as (62e, h), discussed for *elle-même* in section 3.2.4 and involving (as accusatives) competition with weak forms; cases like (62j, k) to which we now turn.

In Chomsky (1986), (62j, k) with *m* indices are both predicted fine. Since the first one is actually ill-formed, a special mechanism is needed to exclude it.⁴³ The second sentence however is fine with the indexing indicated. But we do not know whether this is a case of exempt anaphora or plain anaphora (since these examples involve animates). Constructing comparable examples in French with plain anaphors (inanimates) yields deviant sentences:

- (63) a. [Cette auberge]_i bénéficie du fait que [TP son_i (*propre) jardin est plus spacieux que celui des auberges voisines].
 ‘[This inn]_i benefits from the fact that [TP its_i (*own) garden is more spacious than that of the neighboring inns].’
 b. [Ce musée]_i indique que [TP l'équipe de son_i (*propre) conservateur collabore avec

⁴³ In Chomsky (1986), appeal is made to required, but illegal, movement of the anaphor to its antecedent. Rizzi (1990) develops an alternative in terms of his Anaphor-Agreement effect.

d'autres conservateurs de musée].

'[This museum]_i indicates that the team of its_i (*own) curator collaborates with other curators.'

- c. [La Terre]_i pâtit du fait qu'[TP elle_i-(*)même] n'a pas la priorité sur les hommes].
'[The earth]_i suffers from the fact that it_i(*)self does not get priority on humans.'
- d. * [La Terre]_i a bénéficié du fait que [TP des photos d'elle_i-même et de son satellite ont montré les effets néfastes de la pollution].
'[The earth]_i benefited from the fact that pictures of itself_i and its satellite showed the harmful effects of pollution.'

In other words, a French plain anaphor in a tensed TP disallows a (closest) antecedent located outside of this TP (as, in fact, widely assumed since Bouchard, 1984). This prohibition is not a blanket prohibition against anaphors, as exempt anaphors are of course allowed. This is illustrated by the following examples with *elle-même* in or inside the subject position:

- (64) a. Au début c'est sa belle-soeur qui va venir prendre ses enfants, puis [TP elle-même viendra]
'In the beginning, it is her sister-in-law who will pick up her children, then she (lit. herself) will come.'
- b. [Marie]_i pâtit du fait qu'[TP elle_i-(*)même] n'a pas la priorité sur les hommes].
'[Marie]_i suffers from the fact that her_i(self) does not get priority on men.'
- c. [Marie]_i a bénéficié du fait que [TP des photos d'elle_i-(*)même] et de son frère ont été publiées].
'[Marie]_i benefited from the fact that pictures of her_i(self) and of her brother were published.'

We conclude that the classical Condition A must be amended as follows:

- (65) Condition A: "a plain anaphor and its binder must be in the smallest XP containing both without an intervening subject and no larger than a tensed TP".

Although it differs from previous versions, such a version is not entirely surprising when seen from the perspective of the history of binding theory. It is important to remember however that given the plain/exempt anaphor confound we have discussed, we believe that there had not been a reliable way to establish that this version was indeed the correct one.

5.2 Are Anaphor Binding Properties due to Agree?

We now turn to the question of how this condition should be encoded in the grammar. Such an encoding should derive the c-command requirement, the locality requirement and the exhaustive binding requirement discussed in section 4.2.

Condition A as formulated above imposes a locality requirement on plain anaphor antecedent binding. Proceeding parsimoniously, we should attempt to reduce this requirement to existing, independently motivated requirements. Current theories (Chomsky 2001, 2008) contain exactly two hypotheses imposing locality effects:

1. Closest Attract (or Probe-Goal relations or Agree)
2. Phase theory

Phase theory (because of the Phase Impenetrability Condition) imposes absolute locality requirements: an element inside the spell out domain of a phase head cannot be syntactically directly related to an element external to this phase. By contrast, Closest Attract is more restrictive as it must operate within a phase but it also imposes relative locality requirements. It can only relate elements that are closest to each other and in particular it is sensitive to intervention effects: a Probe cannot see a Goal across an intervening potential Goal (when they are all within a single phase of course), see Zeijlstra (2012) for a survey of approaches to Agree.

Many attempts to reduce Condition A to more primitive theoretical constructs (e.g. Hicks, 2009, Reuland, 2011, Rooryck and vanden Wyngaerd, 2011) construe binding relations involved in Condition A as versions of an Agree relation and thus reduce it to the constraints on Probe-Goal relations. Roughly,

this is done by postulating that anaphors have underspecified features, which must be valued and thus require them to enter into an Agree relation in the course of the derivation.

Invoking Agree as the binding mechanism for anaphors is appealing. Indeed, invoking Agree does not explain the c-command binding requirement but at least reduces it to something else; Agree imposes locality since it must operate within a phase; Agree seems also to encode the exhaustivity of binding, as there typically is a complete sharing of features between a probe and a goal.

However, we now provide reasons why such a simple Agree approach is at best insufficient, at worst inadequate (for French). In a nutshell, here are the reasons, which we address in turn and which as we will see impose boundary conditions on the right account, whatever it is:

1. There is no principled reason why Agree should be involved.
2. There is no principled reason why Agree should entail binding.
3. There is no principled reason why Agree should entail exhaustive binding.
4. Agree is (normally) subject to intervention effects. Anaphor binding is not.
5. The locality imposed by Agree is too permissive.
6. Agree is a derivational constraint but Condition A must hold at LF.

5.2.1 Required Binding, Exhaustive Binding and Locality

In Agree approaches, the fact that plain anaphors must be bound are attributed to the fact that they are underspecified (an idea with various instantiations) and must thus be paired with an antecedent.

A first challenge is to derive the fact that plain anaphors have underspecified features requiring an Agree relation. Failing to do this amounts to stipulating that plain anaphors are plain. This is not a simple result to achieve. The French inanimate pairs *son/ son propre* or *elle/ elle-même* illustrate the difficulty: the pronoun *son* must be sufficiently specified not to have to Agree (it needs no structural antecedent); it thus becomes necessary to provide an explanation as to why adding *propre* with focal stress on it yields possessor *son propre* where *son* must be underspecified (the same would have to hold of pairs *elle/elle-même* or *him / himself*). We know of no plausible way to achieve this result, especially in the light of Charnavel's 2011 and 2013 detailed argument that *propre* is just what it looks like: an adjective meaning "specific to" with focal stress in the "possessor" *son propre* we are discussing here. This difficulty is made especially salient given that adding *propre* with focal stress on the head noun does not yield an anaphoric behavior (see fn 12 and references therein).

Granting that plain anaphors must be bound, a second challenge noted in Drummond et al. (2011) arises from the fact that an Agree relation quite generally (e.g. DP/T, or DP/participle etc...) says nothing about reference: it is a formal procedure of featural agreement. Some additional stipulation granting an interpretation to the Agree relation is needed in case two (referential) DP's are involved.⁴⁴

A third challenge is to derive why they do not tolerate partial binding or split antecedents. Is this explained by an Agree approach? The answer is negative for two reasons.

The first reason is related to the second challenge. Assume an Agree relation between a single plural plain anaphor Goal G and a single plural probe antecedent P: nothing prevents a partial binding interpretation of this relation (where P merely overlaps in reference with G: *A, B and C saw themselves* could mean *A and B saw A, B and C* or *A, B and C saw B, C and D*, etc...). Such an interpretation must be excluded by stipulating how the formal relation is interpreted. Let us assume such a stipulation.

Partial or Split binding would now be excluded under the standard assumption that Agree pairs up a single goal with a single probe. The second reason is that there is no independent justification why an Agree relation must be so restricted.

First, note that multiple probing by the same probe must be allowed – since two plain anaphors can obviously have the same antecedent (without c-commanding each other⁴⁵), unlike what is assumed for standards probes – a problem for all approaches e.g. Hicks, 2009. Furthermore, in French and elsewhere, a coordination of singular DPs can behave from the point of view of agreement like a syntactically plural DP. Traditionally, this is modeled by the whole phrasal conjunction counting as having feature values summing its parts. Using Agree, this can be readily modeled as a single probe having two goals

⁴⁴ Drummond et al. (2011) also discuss other reasons why Agree does not suffice for anaphor binding, in particular some technical reasons to distinguish standard Agree from "binding" Agree, e.g. the required presence of (un)valued and (un)interpretable features on both probe and goal not obviously satisfied by "binding" Agree.

⁴⁵ A configuration $\text{Ant1} > \text{Anaphor1}$ and $\text{Ant1} > \text{Anaphor2}$ but not $\text{Anaphor1} > \text{Anaphor2}$, clearly possible, shows that multiple probing cannot be reduced to Anaphor 1 probing Anaphor2 and being probed by Ant1.

(intervention can't block this in the case of binding, see fourth challenge below) the “sum” of the features of which equaling the feature composition of the probe. In other words, the summing could be a property of the probe rather than of the goal. This would, in the case of binding via Agree wrongly allow inclusive binding (as e.g. in **Ces deux satellites_{j+k} dépendent de lui-même_j et de celui de gauche_k pour leur vitesse* / *these two satellites depend on itself and the left one for their speed*).

Inversely, probing of the same anaphor by say, two distinct singular probes, could license a plural anaphor with split antecedents, where this time, the features of the Goal behave in the same way as the (plural) coordination of singular DPs. It is important to note that while such a conception could turn out to be incorrect, there is no reason as of now, principled or empirical, why it is: this means that the dominant conception of Agree, while it derives the impossibility of split or partial binding, does it by stipulation and thus provides no support for binding as Agree.

A fourth challenge arises from the fact that an Agree relation needed for binding differs from standard Agree with respect to (non-)intervention effects. Closest Attract/Probe-Goal/Agree imposes relative requirements, but antecedent/anaphor binding quite generally does not care about intervening elements. In other words, under an Agree approach (regardless of how it is implemented, e.g. multiple probing by heads – Reuland 2011, or probing by DPs – Hicks, 2009), we expect the following type of configuration to be impossible, where > represents c-command:

(66) Ant1 > Ant2 > Anaphor1 > Anaphor 2

Indeed, if Ant2 probes Anaphor2, given that multiple probing must be allowed (as a single antecedent can bind two anaphors), Ant1 should not be able to probe Anaphor1.

Such a restriction on plain anaphor binding is in fact not found:

(67) [Ces sondes]_m analysent [chaque effet sur elles-mêmes_m]_k comme [DP# une combinaison de sa_k propre magnitude et de leurs_m propres inerties].
 ‘[These probes]_m analyze [each effect on themselves_m]_k as [DP# a combination of its_k own magnitude and their_m own inertias].’

Note first that in (67), the object must be c-commanded by the subject as it contains a plain anaphor (*elles-mêmes*) bound by it. Secondly, the plain anaphor *leurs (propres inerties)* (‘their own inertias’) is bound by the subject across *chaque effet* (‘each effect’) a quantifier which binds the plain anaphor *sa (propre magnitude)* (‘its own magnitude’) insuring the requisite c-command relations. This pattern could be duplicated with all sorts of quantifiers (e.g. downward entailing). We therefore know that the object *chaque effet* (‘each effect’) must c-command DP#. It thus intervenes between the antecedent *ces sondes* (‘these probes’) and the plain anaphor *leurs (propres inerties)* (‘their own inertias’) without blocking it.

In sum, an Agree approach explains neither the status of plain anaphors as plain, nor the prohibition against non exhaustive binding, nor the fact that binding involves reference, nor the lack of intervention effect. This does not mean that an Agree approach is excluded. For the first three challenges, it merely shows that Agree is insufficient. The fourth challenge is more problematic, perhaps crippling, but is not unique to anaphor binding as it stands. In other words, there are no good independent reasons why Agree should be the right mechanism (although it may in fact turn out to be).

5.2.2 Anaphor Binding as Agree: too permissive

It is well known – historically this is one of the main motivations for the distinction between A and A-bar positions – that anaphors cannot come to be bound because of A-bar movement of an antecedent. Thus, consider the following examples:

- (68)
- a. * These pictures, each other’s authors disliked.
 - b. * Quels tableaux leurs propres reproductions (et non pas celles d’autres tableaux du même artiste) ont-elles dévalués ?
 ‘Which paintings did their own reproductions (and not those of paintings by the same artist) devalue?’
 - c. * Quels tableaux des reproductions d’eux-mêmes ont-elles dévalués ?

‘* Which paintings did reproductions of themselves devalue?’

Such examples are ill-formed. The deviance is not due to weak crossover as referential antecedents do not trigger it (see Lasnik and Stowell, 1991), or *which*-phrases (see e.g. Hornstein, 1995) trigger weaker (if any) crossover effects. Under a Closest Attract/Probe-Goal/Agree approach, this is unexpected as antecedent and anaphor are (in a single phase and) not separated by any intervener.⁴⁶

5.2.3 Condition A holds at LF

Finally, we provide reasons why an Agree approach to plain anaphor binding is insufficient to derive Condition A locality effects (in French) as this condition must be seen not (only) as a derivational syntactic constraint but as an LF interface constraint.

The logic of the argument is the following: if plain anaphor binding is due to Agree, binding should be able to take place in the requisite configuration (say a probe locally c-commanding a goal) during a derivation. Binding locality would thus only need to hold at the point of a derivation where the Agree relationship is established. This configuration could be destroyed by further structural changes, e.g. movement of (a container of) the goal. We thus predict that the scope of (a container of) the goal should be independent of the position of the goal at the point at which it is probed. As we now see, this makes incorrect predictions. If however, Condition A is an interface condition holding at LF,⁴⁷ the right predictions are made.

The first paradigm we discuss is based on the fact that the availability of a *de dicto* reading for some element requires that this element be interpreted in the scope of some intensional item.

Consider the following examples:

- (69) a. Pierre_i savait combien d’effet négatif sur lui-même_i, ces médecins pensaient qu’il existait à cause d’une boucle de feedback, tout en sachant qu’il s’agissait en fait d’un effet positif.
‘Peter_i knew how much negative effect on himself_i these physicians thought there was due to a feedback loop, knowing full well it was in fact positive effect.’
b. Peter knew [how much x [these physicians thought [there was x negative effect on himself] due to a feedback loop.

In this sentence, an anaphor, *lui-même*, is locally bound and thus satisfies Condition A in its post movement position but not in its premovement position. In (69a), it is possible to understand that the physicians are incorrect in thinking that the effect in question is negative: this is what they think but in fact, it is positive (and Peter knows this). It is thus possible to continue (in French) with “knowing full well it was in fact positive effect”. In other words, it is possible to interpret “negative effect” as *de dicto* (this is what the physicians think) non *de re* (they are mistaken). This means that it is possible to interpret the restriction of the *wh*-quantifier (*negative effect on himself*) in the scope of the intensional verb *think*: it can be fully (radically) reconstructed at LF, yielding the representation (given in English) in (69b).

By contrast such a reading is not available in the following sentence:

- (70) a. [La fréquence du courant]_i détermine combien d’interférence négative avec elle-même_i, ces physiciens pensaient qu’il existait à cause d’une boucle de feedback. #Il s’agissait en fait d’interférence positive !
‘[The frequency of the current]_i determines how much negative interference with itself_i these physicists thought there was due to a feedback loop. #It was in fact positive interference!’

⁴⁶ For Reuland 2011 which treats some anaphor binding as a case of probing by a single head of both the antecedent and the anaphor, the impossibility of such cases reduces to e.g. heads in the C system C not being allowed to act as anaphoric probe, an unexplained gap (especially given the existence of agreeing C’s e.g. in Bantu languages like Kilega, see Kinyalolo, 1991).

⁴⁷ That Condition A must be an LF condition is not new but we do not believe that arguments based on the *de re/de dicto* distinction have been proposed before. Arguments to this effect are found in e.g. Fox and Nissenbaum, 2004, op. cit. or Lebeaux, 2009, and references therein. Hicks (2009) argues otherwise, unconvincingly in our view: the only arguments against Condition A or B showing that they cannot hold at LF (i) only concern condition B and (ii) are based on Condition B being sensitive to properties (e.g. phonological) deemed not to be visible at LF. However, no arguments are given that these properties could in fact be reflexes of syntactically coded structural differences, hence LF visible.

- b. The frequency of the current determines [how much x [these physicists thought there was [x negative interference (*with itself)] due to a feedback loop]

Here, negative interference must be read *de re* (and either *de dicto* or not – depending on the physicists’ beliefs). Thus the continuation in French: “It was in fact positive interference” is bizarre. Remarkably, if the anaphor in bold is omitted, the continuation is fine, signaling that a *de dicto non de re* reading of the restriction *interférence négative* (‘negative interference’) is possible again.

In other words, sentence (70a) can have the LF representation given in (70b).

An explanation for this pattern correlating anaphor binding and scope is straightforward, provided that Condition A does apply at LF, mysterious otherwise: in (69a), the anaphor is exempt as it is both animate and has a perspective holder antecedent (*Peter*). Since no distance to the antecedent requirement is imposed, it is able to (fully) reconstruct back to a position that is not included in the local binding domain as defined above; it can thus license a *de dicto non de re* reading. However, if the anaphor is not exempt as in (70a) and Condition A must apply at LF, this reconstruction should not be possible. This prediction is borne out showing both that Condition A holds at LF, and that a derivational Agree approach is too permissive.

5.2.4 Conclusion

In this section, we have argued that if plain anaphor binding is due to Agree (i) its properties are left unexplained (that anaphors need to Agree, that reference is involved in plain anaphor binding, that binding must be exhaustive) (ii) plain anaphor binding exhibits all sorts of differences with standard Agree (multiple probing, insensitivity to interveners, possibly probing by XP’s instead of heads)⁴⁸).

Most importantly, a standard Agree approach offers no explanation for (iv) A-bar movement failing to provide plain anaphor binders. In addition, the derivational nature of Agree makes it unable to predict the pattern of reconstructability of moved anaphors, which suggests that (v) Condition A must apply at LF.

We take this to mean that at a minimum: (a) some other mechanism than Agree must be responsible for binding; and (b) the locality requirement must come from Phase Theory. And the fact that anaphor binding is insensitive to intervention suggests that Agree is in fact not involved.

We now turn (section 5.3) to how locality could be reduced to Phase theory. In the last section (5.4), we discuss some consequences, including the nature of the binding mechanism.

5.3 Boundary Conditions on Deriving Binding Locality from Phase Theory

Descriptively, this is essentially the conclusion that we reached:

(71) Binding domain for (French) plain anaphors

A plain anaphor:

- must be bound in its tensed TP
- cannot be separated from its antecedent by a subject.

In order to reduce binding locality to Phase Theory, consider standard assumptions of phase theory (Chomsky, 2001, 2008):⁴⁹

- Phase heads include C, and v.
- Tensed TP is the spell out domain of the C phase.
- Everything in vP (resp. DP) but the subject is the spell out domain of the v phase (resp. D).

This immediately suggests the central idea we want to pursue: TP is a spell out domain and also an opaque domain for Condition A. Quite generally we could take binding domains to be spell out domains. This brings us to the following two proposals to unify binding locality and phase theory:

(72) **Proposal #1**

There is a domain because Condition A:

⁴⁸ Reuland 2011 takes probing of both antecedent and anaphor to be by a single head: see Drummond et al. 2011 for discussion.

⁴⁹ As in Chomsky (2008), we simplify the discussion by taking C (and thus the edge of a phase) to possibly stand for several projections in the left periphery along the lines of Rizzi (1997).

- applies at the LF interface
- applies cyclically

(73) **Proposal #2:** the binding domain for Condition A is the spell out domain of a phase

Condition A: a plain anaphor must be bound within the spell out domain containing it.

The first proposal, essentially taking Condition A to apply at LF cyclically is not new: this cyclic, phase-based idea is implicit in Landau (2007) and explicit in e.g. Lee-Schonfeld (2008), Quicoli (2008).⁵⁰ The LF part has been argued for in e.g. Fox (2000), Sportiche (2003) or Fox and Nissenbaum (2004) and we have provided an independent argument above in section 5.2.3.

The second proposal has two ingredients. First crucial reference is made to “spell out” domain and not to Phase, in effect what Lee-Schonfeld (2008) proposes. This is necessary in our deriving the fact that tensed TP boundaries are opaque for Condition A (see section 5.2.2) and consistent with our conclusion that Condition A is an interface condition. Second, we will construe the appeal to “contain” literally, and this will help us explain why movement can increase the binding possibilities of an anaphor – e.g. it can escape tensed TPs by wh-movement - despite the copy theory of movement: in such cases, a single object can be simultaneously present both inside and outside a spell out domain and is thus not contained in that spell out domain.

5.3.1 The case of TP

Let us illustrate this with the case of tensed TP (in this subsection, we will write all the examples in English to simplify the presentation but remember that all examples are meant to be French examples with plain anaphors).

In this case we have a finite TP complement of the phase head C. The following two sentences have the structure indicated below:

- (74) a. Mary believes that herself knows Bill
 b. Mary believes that a picture of herself shows that...
 antecedent [CP SPEC [C_{phase head} [TP ... anaphor ...]]]
 ← phase edge → ← spell out domain →

Once the phase is completed, the spell out domain TP is transferred. This domain contains an anaphor. By Condition A as formulated in (73), this anaphor must be bound within that TP. Since the antecedent is external to TP, this type of representation crashes, ruling out both sentences in (74).

Note how this immediately derives why movement such as wh-movement, (or topicalization⁵¹, both superficially unbounded, hence) to phase edges cannot supply new antecedents for anaphors: if the moved phrase did not qualify as an antecedent (e.g. via c-command) for the anaphor prior to movement, movement to the edge will not supply one as, by assumption, this moved phrase will not remain within TP, the spell out domain. This is illustrated below for sentence (68b):

- (68b) * **Which paintings** did reproductions of **themselves** devalue?
 [CP **antecedent** [C_{phase head} [TP ... **anaphor** ...]]]
 ← phase edge → ← spell out domain →

5.3.2 The Case of vP and similar XPs with subjects

The case of vP is somewhat more complicated. Consider the case of a verbal XP embedded say, under a causative verb:

⁵⁰ We do not take a stand here on the validity of the grounds under which such proposals were put forth as ours are different. Lee-Schonfeld (2008) takes reflexives, what we call plain anaphors, to have to be bound within the phase containing them (op.cit.) even though she at some point takes tensed TP to be a boundary (op. cit. (15a) p.289).

⁵¹ Carried over to English, the proposal of the text suggests that English topicalization (as e.g. in (68a)) is to a phase edge, an assumption consistent with the fact that English topicalization is unbounded, see e.g. Müller (1995).

- (75)a. $[_{VP}[La\ terre]_m\ laisse\ [[sa_m\ propre\ atmosphère]_k\ modifier\ [sa_{*m,k}\ propre\ composition]]]$
The earth let $[_{XP}\underline{its\ own\ atmosphere}\ modify\ \underline{its}\ own\ composition\]$
 b. DP_m $[_{XP}\ DP_k\ \dots\ X\ [DP_p\ \dots\]]$

This sentence represents a general pattern where:

- X can be v, an ECM T, a small clause head, a D, an N, etc...
- the subject of XP, DP_k , can be or can contain an anaphor bound from outside XP, e.g. by DP_m
- an object further embedded, DP_p , can be or can contain an anaphor bound by the subject of XP, DP_k , but not anything further away, e.g. DP_m .

The sentence in (75a) illustrates this pattern: *its own atmosphere* can antecede *its (own composition)*: XP must be no bigger than a spell out domain. But we also see that *its (own composition)* cannot be bound by *the earth*: given our proposal, there must be a spell out domain containing the former but not the latter. In other words, there must be a phase boundary between the subject of XP and the subject of vP.

However, *its (own atmosphere)* can be bound by *the earth*: they must be in the same spell out domain.

We thus reach a contradiction if the structure is as indicated.

This means the structure of (75a) cannot be as shown in (75b). We need to have the subject of XP both in the same spell out domain as *the earth* and as *its (own composition)* but these two DPs cannot be in the same spell out domain.

In fact the standard assumption about such structures is nearly all we need to resolve this apparent contradiction: such structures are “raising-to-object” structures where the embedded subject has raised into the main clause. Thus, a better representation of (75a) is not (75b) but (75c) as follows:

- (75)c. DP_m $[_{XP}\ DP_k\ X\ [_{YP}\ \cancel{DP_k}\ Y\ DP_p]]$
 \leftarrow binding possible \rightarrow \leftarrow binding possible \rightarrow
 \leftarrow binding impossible \rightarrow

In other words, there are two occurrences of the DP_k *its own atmosphere*: one inside the projection YP, which is the trace of the one raised outside of YP. To handle the binding possibilities in a way that is consistent with our construal of Condition A, it suffices to take YP to be (part of) the spell out domain, and DP_k to have moved out of it to the edge of some phase head (or beyond), say X here for concreteness.⁵² This predicts that:

- DP_p (or something it contains) has a possible antecedent within its spell out domain YP, namely the trace $\cancel{DP_k}$. But DP_m is outside of this spell out domain and thus cannot antecede DP_p .
- DP_k is actually not contained in YP (although one occurrence of it is): indeed we are dealing with a single object with two occurrences,⁵³ one inside YP, the other not. Not being contained within YP, it is not subject to Condition A within YP and it (or an anaphor it contains) can thus be bound by DP_p .

This way of construing containment (as a property of objects and not of occurrences) is in fact independently motivated. For example, wh-moving say, the container of a plain anaphor increases its binding options. This has long been assumed, e.g. for such examples as:

- (76) They know [which pictures of themselves [I like ~~which pictures of themselves~~]]

⁵² DP_k could also have moved past the edge, which would not change the essence of what we present. For the sake of simplicity, we will ignore this option here.

⁵³ It is necessary (under the copy theory of movement) to distinguish the case of remerge/move of some item from the superficially similar case of two objects being identical in all respects including their index and merged independently. The former is the case of Move, subject to Phase locality, the latter is not. Thus the notion of “single object with multiple occurrences” is needed.

Such sentences are well formed even though the lower copy of the anaphor does not satisfy Condition A: what matters is the highest (unreconstructed) copy.⁵⁴ We can demonstrate the same effect in French, controlling at the same time for the plain status of the anaphor involved (something that should be done for English too):

- (77) La terre, de par ses propriétés, soulève la question de quel effet sur sa propre inclinaison (et sur celle de la lune) le vent solaire a eu ~~quel effet sur sa propre inclinaison~~.
 ‘Because of its properties, the earth raises the question of what effect on its own tilting (and the moon’s) the solar wind has had ~~what effect on its own tilting~~.’

Here the *wh*-moved phrase allows the inanimate possessor *son propre* to take as antecedent the main clause subject, a relationship that would not be allowed without movement.⁵⁵

The fact that what matters is the highest unreconstructed copy is illustrated by (70a), relevant aspects of which are repeated below:

- (70) a. [La fréquence du courant]_i détermine combien d’interférence négative avec elle-même_i; ces physiciens pensaient qu’il existait

The relevant syntactic structure the lower CP phase in (i).

- (i) ..._{[CP how much [interference with itself]]} [_{TP} there existed how much [interference with itself]]

The *de dicto* interpretation means that the (relevant portion of the) higher copy is deleted yielding (ii) as input to Condition A:

- (ii) ..._[CP ~~how much interference with itself~~] [_{TP} there existed how much [interference with itself]]

This deletion makes the plain anaphor fully contained in the TP: Condition A should be but is not satisfied, yielding ill-formedness of such a reading.⁵⁶

The consequences of this discussion are several. First, extending the logic of the TP case to this (and other cases) adds a source of evidence regarding the inventory of Phase heads. The usual one is based on Movement/Agree, that is on Closest Attract/ Probe Goal configurations that fail in the absence of any intervention, revealing the presence of a (absolute) Phase boundary. This new source of evidence would be based on the binding possibilities for plain anaphors: if a c-commanding antecedent/plain anaphor (local) binding relation is well formed, there can’t be a phase boundary between them and if it is ill formed (even though all conditions are met except locality) there should be.

Secondly, the above conclusions require a slight rethinking of the earlier conceptions of the “vP” edge as the subject of vP needs to start inside the vP spell out domain and move out of it. The reason why the vP subject is usually considered to be merged at the edge is not completely clear to us, but an equivalent outcome would arise (with all the same advantages and drawbacks) if there is a phase head outside the vP spell out domain attracting (probing) DPs: it would (in general) attract the closest DP first, that is the subject.⁵⁷

⁵⁴ Additional motivations for construing containment as a property of syntactic objects (i.e. “chains”) rather than occurrences are found in Sportiche, 2011, 2012.

⁵⁵ The property of movement to the edge to extend the binding of anaphors could perhaps be exploited to explain why, in languages like Chinese, anaphors in subject position can take an antecedent outside of their clauses even when they are plain (as well known for the SELF anaphor *ta-ziji* – as noted earlier – and shown in Huang and Liu, 2001 for the SE anaphor *ziji*): if such subjects were allowed to move into the edge, this would be expected (fn 49 may be relevant here).

⁵⁶ Technical questions arise in a derivational bottom up cyclic spell out view, a view we do not commit to. If such a view was adopted, the information of which is the highest copy (aka containment) must be available at the point at which Condition A applies however Condition A is formalized. In an Agree approach, the plain anaphor in (77) still has not “Agreed” with its antecedent by the time it is transferred yet the derivation does not crash. In our approach, it must count as not contained in the spell out domain. In (70a) the deletion of the higher trace at the edge must be allowed (but not required) to be triggered by the transfer of the spell out domain, to yield an anaphor fully contained in this domain.

⁵⁷ In slightly different ways, this is argued by many, e.g. in Hinterhölzl 2006 (the phase is AspP above vP), or Coon et al. 2012 or Deal 2013 (the phase is vP but subjects are introduced lower in VoiceP). That subjects do move through a vP external

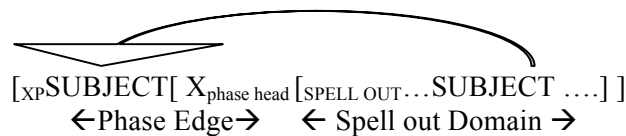
More generally this would apply to any XP with a subject, which unlike in the tensed TP case, tolerates being or containing a plain anaphor bound from the outside: vP, ECM infinitive, small clauses (both of which would involve “raising to subject”),⁵⁸ DP’s with subjects which would have to involve a phase head (see Svenonius, 2003). In all cases, there would have to be movement of the subject from a spell out domain internal position to the edge of the immediate superordinate phase head associated with this spell out domain.

Summarizing the discussion of XPs observed with subject, we reasoned that if

- (i) XP’s subject is bindable from outside; it is outside the spell out domain (at or beyond phase edge)
- (ii) XP’s subject can bind an anaphor within XP, it is or starts inside the spell out domain

And we concluded:

in cases where both (i) and (ii) hold simultaneously, the subject of XP is both inside the spell out domain and at the edge: if XP has a subject, XP must be (included in) a phase and the subject has raised to its edge from some lower position inside the spell out domain of this phase head. This is graphically represented below:



More generally, given our line of reasoning, the presence of a subject should always signal the presence of a phase. The bindability of this subject *qua* anaphor will depend on whether this subject sits at the edge of this phase or not: for all the cases above, it does. In the case of TP, it does not, but note that given the Extended Projection Principle (tensed TPs always have subjects),⁵⁹ we predict that TP is not a phase but that a projection immediately above it (e.g. CP) should be.

5.3.3 The Case of XPs without subjects

Let us now turn to the cases of XPs lacking subjects. Empirically, what we have observed is that in such cases (VP, DP, NP), binding of a plain anaphor is allowed into XP from outside XP. English examples illustrating this possibility could be:

- (78) a. Mary saw [_{DP} a picture of herself]
 b. Mary_k T [_{VP} seem to herself_k [to be t_k a good candidate]]

As they stand, such examples are of course not telling as we need to make sure that *herself* is not exempt. Here are some close equivalents in French where we control for non exemption (with inanimates):

- (79) a. [La terre]_m subit [_{DP} le réchauffement [_{DP} de sa_m propre surface et de celle de la lune]].
 ‘The earth suffers from the heating of its own surface (and of that of the moon).’
 b. [L’horloge]_m a [_{VP} semblé ralentir à son_m propre fabricant et au fabricant de cette montre].⁶⁰
 ‘The clock seemed to slow down to its own maker and to the maker of that watch.’

intermediate position is evidenced by (i) given Sportiche ’s 1988 or 1997 analysis of floated quantifiers (with *tout* at the vP edge).

- (i) [[Les enfants]_k ont [tous t_k [tout [t_k lu]]]]
 [[The children]_k have [all t_k [everything [t_k read]]]]

⁵⁸ The distribution of floated quantifiers shows this, assuming Sportiche ’s 1988 or 1997 analysis, viz:

- (i) Elle trouve [[les enfants]_k [tous t_k beaux]]
 She finds [[the children]_k [all t_k handsome]]
 (ii) Elle a vu [[les enfants]_k [tous t_k rire]]
 She saw [[the children]_k [all t_k laugh]]

⁵⁹ The case of infinitival TPs is more complex and controversial. Whether the EPP holds at the TP level will depend on further considerations (e.g. whether Control is movement or not, whether raising infinitives involve some kind of restructuring or not etc...).

⁶⁰ Unlike English, French requires extraposition of the experiencer in raising cases. This sentence must thus be read with the appropriate intonation.

From this we must conclude that neither the DPs, nor the VP headed by *seem* can be spell out domains. Otherwise, the plain anaphor and the (derived) subjects would not belong to the same spell out domains and binding would be excluded. Once again, this type of assumption is standard: (some) control infinitives are assumed to be phases (as they exclude movement out of them probed by a higher T: they are introduced by a C phase which turns the infinitive TP into a spell out domain). Raising infinitives on the other hand are not phases for a symmetrical reason: the embedded subject can be probed by a higher T so no phase boundary can intervene.

In order to explain what happens with DPs, we need to assume that a DP must be a phase only if it licenses a genitive subject, otherwise it is not. Thus the phase inducing head must be that responsible for prenominal possessive pronouns (in French; and, presumably, for prenominal genitives in English).⁶¹

Similarly, in the case of the *sembler/seem* headed VP: it can't be a Phase (as is standardly assumed given that the main T can probe into the infinitive) since the experiencer can come to be bound by the raised subject.

5.3.4 Binding locality from phases: predictions for extraction

Note first that different phases show different extraction possibilities.

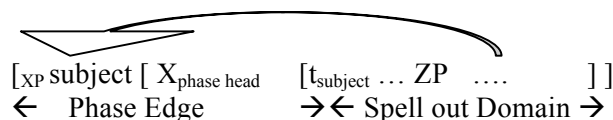
Unlike the CP edge, the vP edge is tolerant: while the CP edge in languages like French (or English) only tolerates one (wh-)element (giving rise to some islands), the vP edge under the standard view tolerates multiple elements (the subject, possibly an object, a wh-phrase – on its way to the C edge).

A French DP on the other hand is intolerant: just like CP, only one element can be attracted to the edge, if there is a phase head licensing a prenominal genitive. Given our reasoning above, this attracted element must be the subject of the DP if there is one. Once again, such an assumption is independently justified. Indeed, as is well known for French (see e.g. Sportiche, 1990, Valois, 1991), wh-extraction from inside DP is possible, but only if the extracted phrase can independently become the subject of the DP: this falls out if the edge of the DP phase is intolerant, like the CP phase, only allowing one element, which must be the subject of DP (as will be exemplified below).

We end up with the following picture: extraction from inside XP is possible or not depending on how tolerant of multiple elements the edge is.

Tolerant phases: Multiple Extraction possible. Ex: vP, ECM infinitives, small clauses

Intolerant phases: Multiple Extraction impossible. Ex: CPs, DPs



We are claiming that the presence of the subject of an XP typically reveals the presence of a Phase boundary because of binding reasons.

This establishes a connection between binding theory and movement theory in the following way: if a subject reveals the presence of a phase boundary, we should expect to see island effects due to the presence of this phase boundary correlating with the presence of a subject. But we should only expect to see evidence of such effects in intolerant Phases, that is DPs or CPs (as tolerant phases allow multiple extractions anyway) and for constituents showing phase variability.

Basically, this means DPs may or may not be phases, as opposed to CPs which are always phases.

In other words, we should expect to find cases in which

- A given DP without subject tolerates extraction (it is not a phase)
- The apparently same DP with a subject precludes extraction (it is a phase and extraction is blocked)

Such effects are indeed observed in French and illustrated by the following cases of *en-cliticization*:

(80) a. Pierre examine [_{DP} la/une photo de cet immeuble]

⁶¹ This may be tied to when possessor raising is allowed/required: precisely when a possessor lacks DP internal Case licensing and can thus escape the non phasal DP.

- ‘Peter examine the/a picture of this building.’
- b. Pierre en examine [_{DP} la/une photo ~~en~~]
Peter en examine the/a picture en
 ‘Pierre is examining the/a picture of it.’
- c. Pierre examine [_{DP} ma photo de cet immeuble]
 ‘Peter examine my picture of this building.’
- d. * Pierre en examine [_{DP} ma photo ~~en~~]
Peter en examine my picture en
 ‘Pierre is examining my picture of it.’

This first paradigm (80a-d) shows that extraction of *en*, the genitive clitic DP complement of the head noun is sensitive to the presence of the possessive subject: a subject (here *ma* (*my*)) blocks extraction (the same pattern holds if the extracted DP was a wh-phrase).

What is crucial is that even in cases where a DP c-commands a genitive *en*, movement is not blocked (so that a violation of Closest Attract is unlikely). This is shown, e.g. by the following case in which the Small Clause SC is also a phase, but a tolerant one:

- (81) a. Pierre croit [_{SC} Jean [capable de ça]]
 ‘Peter believes Jean capable of it.’
- b. Pierre en croit [_{SC} Jean [capable ~~en~~]]

In such a case, the intervening subject *Jean* does not block the movement of *en*, an unexpected outcome if an intervening DP blocked probing.

Furthermore, blocking of *en*-extraction by a DP subject of DP occurs (even if *en* is not plausibly analyzed as a moving DP, thus not plausibly probed by the same element as this subject).

- (82) a. Pierre lit [_{DP} trois livres (de cuisine)]
 ‘Peter read three books (about cooking).’
- b. Pierre en lit [_{DP} trois ~~en~~] (, de livres de cuisine)
Peter en read three en—(, of books about cooking)
 ‘(As for (cook) books,) Pierre read three.’
- c. * Pierre en lit [_{DP} **mes** trois ~~en~~] (, de livres (de cuisine))
Peter en read my three (, of books(about cooking))
 ‘(As for (cook)books,) Pierre read my three.’
- d. Pierre en lit [_{DP} **les** trois premiers ~~en~~] (, de livres)
Peter en read the three first (,of books)
 ‘(As for books,) Pierre read the first three.’
- e. * Pierre en lit [_{DP} **mes** trois premiers ~~en~~] (, de livres)
Peter en read my three first (, of books)
 ‘(As for books,) Pierre read my first three.’

A comparison of (82a) and (82b) illustrates that much like *one*-replacement in English (*this big book about cooking/ this ~~big~~ one about cooking/ this big one about cooking/ this ~~big~~ one about cooking*) the clitic *en* can replace a bare noun or a bare noun and some or all of its dependents but not numerals. It can thus be analyzed as a pro-NP, moving from DP internal position to clitic position in the T domain. Note in particular that such pro-NP can never be realized as the possessor of a DP.

What the paradigm in (82c), (82d), (82e) shows is that the presence of an intervening DP subject blocks extraction of this NP. Because pronominal possessors and definite articles are conflated in French, the interpretation of (82c) is unclear. However (82d) (with a definite article but without possessor, where the extraction is possible) and (82e) (identical to (82d), but with possessor, and where the extraction is blocked) show that the blocker is not the definite article but is related to the presence of the possessor.

This blocking effect once again is not plausibly an intervention effect on probing as the DP subject and the NP are not attracted by the same elements. If however, the presence of a possessor is made possible by a phase inducing head, all these blocking effects are just reflexes of the intolerant character of this DP phase.

5.3.5 Summary

We have proposed to reduce the locality imposed on the relation between a plain anaphor and its local binder by requiring that an anaphor be bound in its spell out domain.

This has led to slight modifications of Phase theory (regarding both Phase inventory and Edge properties), most independently justified. This has allowed us to account, e.g. in the case of extraction from DPs, for phenomena seemingly showing a mixed behavior: an intervening subject selectively blocking extraction of a DP or of non DP XPs.

This has also allowed us to derive two properties of the interaction between movement and binding. First, we have derived why movement of a potential antecedent to the edge never provides new binders for plain anaphors, while predicting that movement of a plain anaphor to the edge does increase the set of potential antecedents for this anaphor.

5.4 Some Consequences and Questions

5.4.1 Reconstruction

Reuland (2011), in the context of the theory of exempt anaphora that it defends, claims (op.cit. p.93) that there is no need for reconstruction, at least as far as (plain) anaphor binding is concerned. Thus, in an example such as (Reuland, 2011, p. 93, ex 26):

- (83) a. Which picture of himself/herself does Max think that Lucie likes?
b. Max knows which pictures of himself/herself Lucie likes.

there is no need to assume that any particular structural relation has to hold between them and their antecedents, it is claimed, because these anaphors are all claimed to be in exempt positions.

Given the theory developed here however, this conclusion does not hold. Indeed, the positions of anaphors are not exempt but as they are all animate, the anaphors themselves may be exempt. To decide whether reconstruction is needed we would need to decide whether these anaphors are exempt in such cases. This would require a theory of when exemption is allowed, that is precisely what conditions an antecedent must meet to make the anaphor it binds exempt (see Charnavel, 2014, for a proposal).

But there are other ways to decide the issue. We have already seen one: the availability of a *de dicto* non *de re* reading in (69a) shows that radical reconstruction of the (restriction of) the moved wh-phrase is possible.

We can construct another one by looking at what happens with inanimate anaphors in French which we have shown cannot be exempt. Consider the following pairs of examples involving possessor *son propre* and *elle-même* which must be locally bound by inanimate antecedents:

- (84) a. Cette loi a entraîné la publication d'un livre entier sur ses propres conséquences et celles des décrets associés.
'This law led to the publication of a whole book about its own consequences and the consequences of the related decrees.'
b. Je me demande de quel livre sur ses propres conséquences et celles des décrets associés cette loi a entraîné la publication.
'I wonder which book about its own consequences and the consequences of the related decrees this law led to the publication of.'
- (85) a. La terre impose des forces latérales sur elle-même du fait de sa rotation.
'The earth imposes lateral forces on itself because of its rotation.'
b. Quel genre de forces sur elle-même la terre impose-elle du fait de sa rotation ?
'What kind of forces on itself does the earth impose because of its rotation?'

In both cases, possessor *son propre* (resp. *elle-même*) must be a plain anaphor. Since the second example is well formed, this anaphor should be c-commanded by its antecedent but it is not. However, this structural requirement is met prior to the movement of the wh-phrase. Given our earlier conclusion that Condition A must hold at LF, reconstruction must be hypothesized to feed Condition A.

5.4.2 A/A-bar Distinction

As we have discussed, certain kinds of movement can feed Condition A by providing a c-commanding antecedent not available otherwise. Classically, the difference between instances of movement that can feed Condition A in this manner and movement that can't was expressed in terms of the A/A-bar position difference. Anaphors were required to be A-bound so that only A-movement could be such a feeder. Even though this amounted to an undesirable stipulation (why is this difference relevant?), it was at least possible to define the A/A-bar difference in a non *ad hoc* way, namely by taking A-positions to be potential theta positions. Indeed, the major motivation for defining A-position in terms of potential theta positions was the fact that subjects of TP could be anaphor binders even though they were not always theta positions, e.g. in the following type of raising to subject sentences:

(86)a. Mary_i T [_{VP} seem to herself_i [to be t_i a good candidate]].

Because of the exempt anaphora confound (the reflexive is animate, hence possibly exempt), we repeat here the French example (79b) with an inanimate anaphor to illustrate this point without this confound:

(79) b. [L'horloge]_m a [_{VP} semblé ralentir à son_m propre fabricant et au fabricant de celle-là]
'The clock seemed to slow down to its own maker and to the maker of that one.'

However, this type of definition has been rendered unavailable since the introduction of the Predicate Internal Subject Hypothesis which uniformly makes the subject of TPs, or the relevant position from which *son propre* is bound, never a theta position.

The proposal we are making in effect redefines the A/A-bar distinction not in terms of differences between landing positions, but in terms of movement span (at least as far as Binding theory is concerned) in the following way:

- A-bar movement is movement to the edge of a phase
- A-movement is movement within the spell out domain of a phase head.

The A/A-bar distinction is historically not invoked solely for its role in feeding binding. It has been claimed to play a role in several other questions such as (i) the question whether improper movement (A-bar movement followed by A-movement of the same element) is allowed (ii) Weak crossover (A-movement does not trigger weak crossover effects, A-bar movement can) (iii) Licensing of parasitic gaps (A-movement does not license parasitic gaps, A-bar movement can).

All such correlations are controversial but would be worth exploring in the context of our characterization of the A/A-bar distinction.

5.4.3 Deriving Condition A: what it would mean

Taking the previous conclusions into account, we conclude that the correct descriptive generalization for Condition A is the following:

Condition A: a plain anaphor must be bound within the spell out domain containing it.

Assuming this formulation, a theory of Condition A should explain the following properties:

- #1 Why certain expressions are plain anaphors (= require an antecedent)
 - #2 Why Condition A holds of plain anaphors at LF (that is at the syntax-interpretation interface)
- Why this antecedent
- #3 is unique
 - #4 c-commands it⁶²
 - #5 must be in the same spell out domain as the anaphor

⁶² It is sometimes reported that c-command is not necessary (cf. e.g. Drummond and al. 2011 (p. 414ff and fn37), and references therein). Such cases are all with animate reflexives, hence not properly controlled for the plain/exempt distinction. Furthermore, it is not even clear that the cases reported do not in fact involve LF c-command.

and has a referential value

#6 either exactly identical to that of the plain anaphor

#7 or weakly (proxy) identical

#7 takes into account Jackendoff's 1992 Madame Tussaud "proxy" cases, in which the anaphor can be interpreted as referring to a proxy of the reference of its antecedent (as e.g. in (i) *John fell on himself*, where John the person falls on his wax statue).⁶³ Crucially, such proxy binding can behave like standard plain anaphor binding (cf. e.g. with inanimate *elle-même*: *La lune fait de l'ombre sur elle-même*/ *The (real) moon casts a shadow on (a wax representation of) itself*).

Given current formalization, no proposal in the literature explains #1, #2 and #5.

Explaining #1 means explaining why, e.g. inanimate French *son* (resp. French *elle*) combined with the adjective *propre* inducing focal alternatives on *son* (resp. with *même*) turns it into a plain anaphor especially given Charnavel's 2013 conclusion that this ought to be a synchronic, compositional process.

It also means explaining why animate versions of the very same items are seemingly allowed to escape Condition A.

Explaining #2 means deriving why this condition must hold at the LF interface rather than e.g. derivationally only.

Explaining #5 means deriving the size of the locality domain for plain anaphor binding, and crucially why the antecedent cannot be at the edge of a phase in an A-bar position.

Explaining #4 could follow from taking binding to be Agree or Move, but each suffers from problems.

(Derivational) Agree by itself fares the worst, as it does not explain the uniqueness of the antecedent (#3), the fact that reference is involved and, when it is, the fact that exhaustive binding is required (#6).

Movement approaches fare better, although some (possibly fixable) problems arise.

The movement approach in Hornstein (1995, 2001) discussed in Drummond et al. (2011) assumes that a plain anaphor simply is a trace of its antecedent. It does derive properties #3 and #6. But it seems to make a principled treatment of #1 difficult to attain (why should traces be spelled out the way they do – fairly consistently across a wide variety of languages). Furthermore it may be difficult to reconcile with #7: unless the syntax of such cases is not what it seems – definitely an option, it requires that an antecedent and its trace be allowed to differ in interpretation in a way never possible otherwise. In addition, such a movement approach seems too restrictive: while interpreted copies of a moved element must have exactly the same interpretation, an antecedent and an anaphor need to have the same denotation but not the same interpretation. Thus, in *the children looked at themselves*, both *the children* and *themselves* must refer to the same set, but this need not mean (under a non distributive reading) that e.g. all the children were looked at: a vaguer interpretation is possible where the set of looked at children can count as the whole set of children.

Kayne's 2002 suggested movement approach to anaphor binding is done in terms of doubling: the antecedent and the anaphor are generated as a double, e.g. in English [*[John him] self*], with the antecedent *John* moving away. It shifts to properties of doubling questions about uniqueness of the antecedent, the fact that reference is involved and exhaustive binding (which in actual doubling cases – e.g. Clitic Left Dislocation – does have these properties). It can thus reasonably be said to reduce #3, #4 and #6 to independent factors. It does not preclude explanatory answers for #1 but faces the same kind of problem as Hornstein's approach regarding #7 or the non identity of meaning just discussed.

6 Conclusion

The goal of this article was to investigate the behavior of anaphors based on French data involving *son propre* and *elle-même* with the aim (i) to circumscribe the empirical generalizations applying to plain anaphors and subsumed under Condition A of the binding theory, (ii) to explore boundary conditions on explanatory accounts of Condition A, and (iii) ultimately to derive its effects. Unsurprisingly, French

⁶³ But not vice versa (sentence (i) cannot mean that wax-John fell on real John), an asymmetry that must be accounted for independently.

anaphors clearly support the need to distinguish between plain anaphors that obey Condition A and anaphors that are exempt from it (and thus the need for a theory of exempt anaphora).

Because, as suggested by crosslinguistic work, exempt anaphors seem to need to refer to live persons, restricting attention to inanimate anaphors should be a useful tool for circumscribing the scope of Condition A. It turned out this way in French: based on this independent criterion, we have demonstrated that (i) the exempt/plain distinction correlates with inclusive/exhaustive binding possibilities, and (ii) plain anaphors must be bound within a local domain that roughly corresponds to the smallest XP with an intervening subject containing the anaphor no larger than a tensed TP.

We believe that this type of investigation, clearly and reliably separating plain from exempt anaphors must be carried out in a fair sample of languages before trying to formulate a general theory of Condition A locality of binding.

Further, we have argued that this view of binding domains should be integrated in the grammar in terms of phase theory: by formulating Condition A as requiring that a plain anaphor must be bound within the spell out domain of a phase containing it, and that appeal to spell out (or transfer) domain – a notion exclusively relevant at the syntax/interpretation interface, makes sense of the fact that Condition A must be an interface condition. This has also allowed us to derive various properties of anaphor binding, e.g. when movement can feed or bleed Condition A, as well as providing new empirical grounding for the notion of Phase, the inventory of phase heads and the paths of syntactic derivations.

Many questions remain which we cannot address here.

Some are of a general nature.

One concerns the exact nature of the binding relation between an antecedent and a plain anaphor which some authors (Hicks, 2009, Rooryck and van de Wyngaerd, 2011, or Reuland, 2011) propose to reduce to an Agree relation, while others (Hornstein, 1995, 2001, or Kayne, 2002) invoke Movement (plus doubling).

Another related one evoked earlier asks what makes an expression anaphoric, and beyond this how the behavior of plain and exempt anaphors which can be intrinsically identical, can superficially differ rather radically in terms e.g. of locality or inclusive reference (a question discussed in part in Reuland, 2011).

Tying these last two concerns together, Charnavel (2014) proposes that apparent long distance binding is always mediated via an intermediate, spell out domain internal logophoric operator LOp, so that even exempt anaphors obey Condition A. The fact that an exempt anaphor allows inclusive binding as shown in section 4.2 is thus consistent with its being exhaustively bound by LOp, and thus with a movement approach, with inclusive binding being a property of the referential dependence of LOp and its own antecedent(s).

Some concerns are tied to our particular proposals.

How do our findings about the distribution of these French anaphors generalize to other anaphors in French and in other languages?

These (French) inanimate anaphors are never exempt from Condition A: are inanimates always plain crosslinguistically? Are animates always (potentially) exempt? While our conclusions are consistent with some findings, e.g. what Huang and Liu (2001) report of the Chinese anaphoric system, it remains to be seen how generally they hold and in particular how they can be integrated with the very substantial body of work on anaphora such as Safir (2004), Hicks (2009), Reuland (2011) or Rooryck and van den Wyngaerd (2011) in some coherent whole.

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