

SUCCESSIVE CYCLICITY, PHASES, AND CED EFFECTS*

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Abstract. This paper discusses Chomsky's (2008) phase-based analysis of the *Subject Condition* (where islandhood is regarded as a locality constraint on phase *edges*), paying particular attention to the claim that successive cyclic A-movement can be used to circumvent islandhood in ϕ -defective environments. Both hypotheses are considered in the context of Romance, where subextraction from (post-verbal) subjects of transitive verbs has been reported to be possible since Uriagereka (1988). The paper puts forward an analysis that recasts *Activity Condition* accounts of CED effects (see Boeckx 2003) within the framework of phases (see Chomsky 2000 through the present). As will be shown, such an approach is superior to previous ones in that it covers not only the standard cases (where subjects undergo local movement to SPEC-T), but also those where islandhood is avoided through A-movement.

1. Introduction

The goal of this paper is to discuss the interaction among phases, (successive) cyclicity, and Huang's (1982) CED effects.¹ Special attention, though, will be paid to the possibility, raised by Chomsky (2008), that successive cyclic A-movement can be used to allow subextraction from subjects, a process that is known to be ruled out in standard cases (see Boeckx 2003; Stepanov 2001; and references therein):

- (1) *[_{CP} Who_i C did [_{TP} [a story about t_i]_j T [_{v*P} t_j v* amuse you]]]?
[from Lasnik & Saito 1992:42]

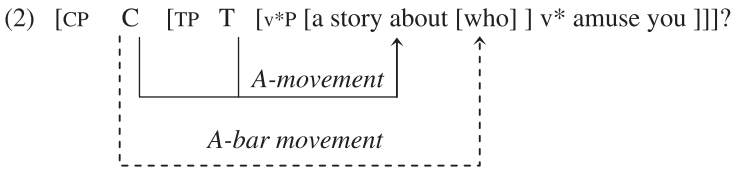
The customary assumption with respect to (1) is that subextraction takes place from the final landing site of the subject, SPEC-T, a position where this dependent is 'frozen in place' (i.e. becomes syntactically inert/

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¹ The label CED (shorthand for *Condition on Extraction Domains*) refers to Huang's (1982) pioneering investigations, which showed how, contrary to objects, subjects and adjuncts behave as islands. Huang's findings have received different implementations in the literature (see Boeckx 2003; Stepanov 2001; and Uriagereka 1999a; among others, for discussion). In this paper I focus on those implementations taking agreement and locality conditions as the key to understand constraints on displacement.

inactive), according to the Probe-Goal framework outlined in Chomsky (2000, 2001).

Chomsky (2008) gives a new twist to such an account, suggesting that all operations apply at the phase level, with intra-phasal violations of cyclicity constraints (e.g. Chomsky's 1993 *Extension Condition*) being allowed – in the current system, the sole cyclicity violation involves going back to previously transferred phases. Chomsky (2008), in particular, takes A and A-bar movements to occur in parallel after C is introduced in the derivation, with T acting as a Probe due to C, as shown in (2) (see Bošković 2007):



From this new perspective, wh-movement in (1) takes place from the base position (SPEC- v^*), not the derived one (SPEC-T), making it difficult to take freezing effects as islandhood triggers, a possibility (which I discuss below) that Chomsky (2008) exploits giving rise to a new approach to the *Subject Condition*. At the same time, in Chomsky (2008) it is first argued that non-freezing specifiers (intermediate positions of long-distance A-movement in ECM and raising cases) should license subextraction: since these specifiers are related to a ϕ -defective Probe (containing just number or person, but not both), the relevant dependent will remain active, and, consequently, its internal structure will be accessible to an A-bar Probe.

In this paper I consider evidence that suggest that Chomsky's novel claims with respect to the *Subject Condition*, successive cyclic A-movement, and subextraction amelioration must be qualified: it is not the case that the simple addition of extra A type landing sites circumvents island effects; rather, it is the addition of extra ϕ -defective domains (i.e. more weak phases) that does so. I further discuss the status of the *Subject Condition*, considering empirical evidence from Romance, both old (reported in Uriagereka 1988) and new, that will allow me to recast Chomsky's (2008) phase-based account in a way consistent with existing freezing approaches, such as Boeckx's (2003).

The paper is organized as follows: section 2 introduces the framework of phases (see Chomsky 2000 through the present), and its bearing on successive cyclicity; in section 3, I go back to CED effects, reproducing Chomsky's (2008) analysis of the *Subject Condition*, and

the objections to freezing-based accounts raised by Fortuny (2008); in section 4 I test (and qualify) the possibility that A-movement be used to circumvent the *Subject Condition*; section 5 summarizes the main conclusions.

2. Phases and successive cyclicity

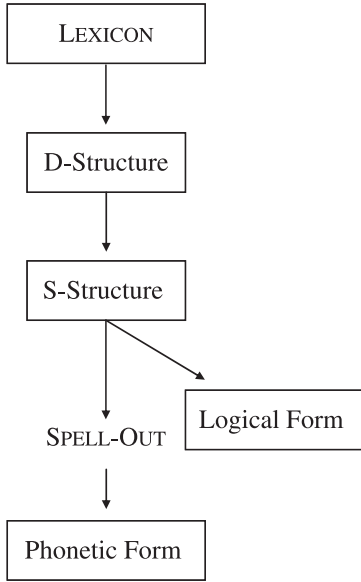
Chomsky (2000) introduces the notion of *phase* in order to reformulate the idea of *cyclic domain* within minimalism. Aiming at reducing computational complexity, Chomsky (2000:100–108) takes derivations to be chunked in small pieces (i.e. phases), which are to be sent to the interfaces by means of a TRANSFER operation. In the standard formulation (see Chomsky 2000:106, 2001:12, 2004:107, 2005:17, 2007:12, 2008:143), v^*P and CP are identified as the phases,² the domains of ϕ -feature valuation and structural Case assignment.

As noted in recent literature (see Boeckx 2007; Boeckx & Grohmann 2007), there is an obvious connection between phases and linguistic levels (i.e. *cycles*; see Lasnik 2006 for discussion). One of the main goals of minimalism is precisely to eliminate the linguistic levels of the EST/T-model, where three internal cycles were distinguished: Deep Structure, Surface Structure, and Logical Form (DS, SS, and LF). Chomsky (1993) eliminates DS and SS by bringing back *generalized transformations*, and invoking a Merge-based approach to phrase structure; however, LF still remains as the level where operations can apply after TRANSFER (earlier, SPELL-OUT) takes place. Chomsky (2000:131) eliminates this sole residue, advocating a *Single Cycle Syntax* model, where both overt and covert operations apply before TRANSFER (see 3).³

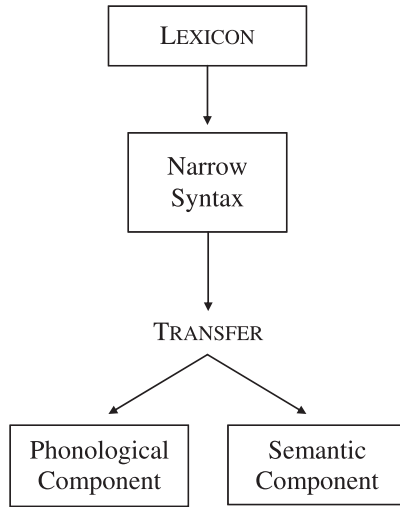
² Chomsky (2001:12, 2004:124) introduces the dichotomy *strong phase* vs. *weak phase* to accommodate the findings of Legate (2003). As Chomsky (personal communication) points out, such a distinction is not really needed, the empirical facts noted by Legate, as we will see, arise as a consequence of how successive cyclicity works. See also Boeckx (2008c), Marantz (2007), and Richards (2004) for qualifications of the *strong/weak* distinction.

³ In the first formulation of *Phase Theory* (see Chomsky 2000, 2001), covert operations were recast by invoking (long-distance) Agree alone. However, due to the empirical arguments provided in Nissenbaum (2000) and Pesetsky (2000), Chomsky (2004:111, 2005:13) accepts the possibility that internal Merge could apply after TRANSFER, a scenario which would be problematic for the so-called *No Tampering Condition* (see Chomsky 2008).

(3) EST/T-MODEL
(Chomsky & Lasnik 1977)



PHASE CYCLE MODEL
(Chomsky 2000 to the present)



Restricting levels to the external ones (the interface levels), phases emerge as the counterparts of cycles, the relevant units for meaningful (i.e. compositional) computation.

For optimal computation, Chomsky reasons, once a phase is completed, it must be handed over to the interface levels (by means of TRANSFER), which connect Narrow Syntax with the sensorimotor (SM) and conceptual-intentional (C-I) systems. As Chomsky (2004:108) argues, phases cannot be transferred in full; otherwise, displacement would be impossible. He therefore restricts TRANSFER to the *complement domain* of phases, as shown in (4), where Ph and β stand for *phase head* and *complement domain* respectively:

(4) [α [Ph β]]

Chomsky (2004:108) dubs the α -Ph cluster *edge*, which includes the phase head itself and all its specifiers. The edge is what remains of a phase after TRANSFER, whatever is visible at subsequent derivational stages, all the rest being ‘forgotten’. In order to implement this idea, Chomsky (2000:108, 2001:14, 2004:108) formulates a *Phase Impenetrability Condition* (PIC). I reproduce it here, adopting Chomsky’s (2008:159 fn. 24) qualifications to the version provided in Chomsky (2001), where the merger of the next higher phase head was the trigger for TRANSFER.

(5) *Phase Impenetrability Condition*

The domain of Ph is not accessible to operations (outside PhP),
only the edge of PhP is

Within this line of argumentation, successive cyclicity effects (reconstruction, inversion, agreement, quantifier float, etc.) are taken to reinforce the toll-like status of phases. In particular, Chomsky (2000:108, 2001:12, 2004:112, 2005:18) assumes that long-distance movement proceeds by small ‘touchdowns’ through the phase edges:

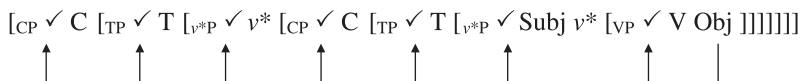
The Phase-Impenetrability Condition requires that \bar{A} -movement target the edge of every phase, CP and ν P. There is evidence from reconstruction effects and parasitic gaps that this may be true.

[from Chomsky 2000:108]

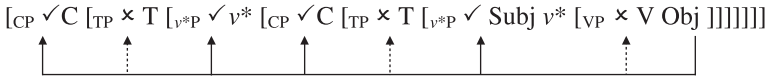
The requirement for long-distance dependencies to proceed by a step-by-step basis goes back to Chomsky’s (1973) claim that movement must obey a *Subjacency Condition*, whereby movement cannot cross more than one of the *bounding nodes* (at the time, S = CP and NP = DP). In the next sections I delve into two aspects of successive cyclicity that have become particularly debated: first, how long distance dependencies are created (targeting *all* or just *some* intermediate projections), and, second, whether the type of movement (A or A-bar) is relevant for the length of such dependencies.

2.1. *Uniform paths vs. punctuated paths*

There is substantial empirical evidence that movement occurs as suggested above, with syntactic objects passing through some points along their movement path before reaching their final destination. I will not attempt to review the evidence that movement occurs in such a local fashion here (see Boeckx 2007 for ample discussion). What I do want to address is the issue of *how local* those steps must be. More concretely, I want to discuss whether the paths created by successive cyclic movement are *uniform* (targeting each and every one of the available landing sites between the base and final position) or *punctuated* (targeting dedicated landing sites, the so-called *escape hatches* or *edges*). Consider both possibilities in the case of the displacement of an object DP:

(6) *Uniform Path*

(7) *Punctuated Path*



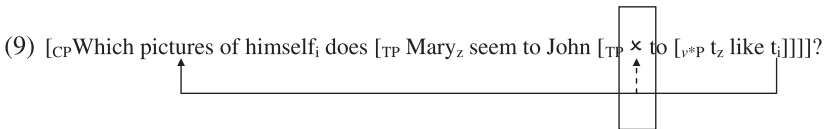
- ✓ targeted position
- × skipped position

Abels (2003) argues at length in favor of the punctuated option, which, just like Chomsky’s system, makes some projections special: the cyclic/phasal nodes. Abels’s (2003:26–33) main argument, concerning reconstruction, comes from the paradigm in (8):

- (8) a. * $[_{CP}$ John said $[_{CP}$ that Sue likes pictures of himself]].
- b. $[_{CP}$ Which pictures of himself_i did John say $[_{CP}$ that Sue likes t_i]]?
- c. * $[_{CP}$ Mary seems to John $[_{TP}$ to like pictures of himself]].
- d. * $[_{CP}$ Which pictures of himself_i does Mary seem to John $[_{TP}$ to like t_i]]?

The example in (8a) is ruled out because *John* cannot bind the anaphor *himself*, these being too far away from each other. As for (8b), it is acceptable, which shows that the *wh*-phrase must stop at some point between *John* and *Sue* (presumably, the embedded SPEC-C), since the former can bind the anaphor. The outcome of (8c) makes a similar point: *Mary* must have left a copy between its surface position and below *to John* so that binding of *himself* by *John* becomes impossible.⁴

Yet the crucial example is (8d). Abels (2003) takes its unacceptability to indicate that *wh*-movement does not target non-finite (i.e. raising) SPEC-T: if it did, the anaphor *himself* could be bound by the experiencer DP, *John*. The movement that would be required for such binding dependency to obtain is indicated in (9):



As the structure in (9) shows, failure of *John* to bind *himself* indicates, according to Abels (2003), that SPEC-T is not a cyclic node, movement targeting only dedicated positions: SPEC-C and SPEC-*v**, the phase edges.

⁴ As Boeckx (2007:58) notes, the experiencer DP *John*, though buried within the PP projection, can bind into the embedded clause by means of a process of reanalysis. I refer the reader to Boeckx (1999) for a possible account of these facts.

Although compelling at first glance, Abels's (2003) conclusion is not necessarily conclusive. First, the datum in (10) below, taken from Boeckx (2007) and attributed to Norbert Hornstein, is unexpected: the logic of Abels's (2003) proposal predicts that it should be fine, contrary to fact. If wh-movement stopped at the most embedded SPEC-C, *John* should be able to bind the anaphor *himself*.

- (10) *_{[CP Which pictures of himself_i does [TP Mary seem to Susan [TP to have told John [CP that she likes t_i]]]]?}

Second, and more importantly, as Boeckx (2007) points out, Abels's (2003) reasoning crucially builds on the premise that (deleted) copies must *a fortiori* feed reconstruction; or, in other words, that the following correlations hold: (i) if there is a copy, then reconstruction obtains; (ii) if there is no copy, then reconstruction fails. As Boeckx (2007) argues, this correlation is, as it stands, too strong:

Whereas the copy theory of movement readily accounts for reconstruction by involving the interpretation of unpronounced copies, we cannot conclude from this that if no reconstruction effect is found, no copy is available at the relevant site. All we can conclude from the absence of reconstruction is either that there is no copy present, or that a copy was created, but for some (perhaps interpretive) reasons cannot be interpreted in the relevant position. [from Boeckx 2007:58]

Besides evidence from the A-movement realm (which I will introduce and discuss in the next section), Boeckx (2007) offers one other piece of A-bar evidence to argue against the punctuated view of successive cyclicity, provided in (11). It shows that the wh-moved phrase *which of his pictures* cannot reconstruct within the embedded clause in order for the pronoun to be bound by the subject quantifier *everybody*.

- (11) [_{CP Which of his_{1/*2} pictures_i did Bill₁ ask me [why nobody/ everybody₂ hated t_i]]?}

Synthesizing, we have just considered some data in support of Boeckx's (2007) claim that the absence of reconstruction effects cannot necessarily lead us to the conclusion that there are no copies (*contra* Abels 2003 and Abels & Bentzen 2009). In the next section I will discuss additional evidence that points to the same conclusion.

2.2. A- vs. A-bar successive cyclic movement

Chomsky has often noted that there may be a distinction concerning the A/A-bar cut with respect to successive cyclicity (see Chomsky 2001:43,

2004:127, 2005:18, 2008:144).⁵ Moreover, several authors have in fact proposed that long-distance A-movement does not proceed through small steps, but rather in ‘one fell swoop’, perhaps not even leaving a copy in their first-Merge position (see Epstein & Seely 2006; Lasnik 1999).⁶

As Boeckx (2007:29 ff.) emphasizes, it would be conceptually odd for A and A-bar movement to differ in this respect: internal Merge should work alike, regardless of the kind of movement involved. However, some data (similar in nature to the ones provided by Abels 2003) cast doubt on this hypothesis. Consider, to begin with, the well-known fact that local A-movement fails to reconstruct:

(12) No one is certain to solve the problem. [from Boeckx 2007:59]

The important thing to note about (12) is that it cannot be paraphrased as “it is certain that no one will solve the problem”, which means that the DP subject fails to reconstruct below negation, in its first-Merge site. Boeckx (2001) discusses facts like this, concluding that A-movement in general fails to reconstruct for interface reasons: simplifying somewhat, the low copy in local A-movement is useless for scope purposes at the interfaces because it contains uninterpretable morphology, i.e. structural Case.

Interestingly, the same facts appear to hold in Spanish. According to Suñer (2003), subjects do not reconstruct in this Romance language either, as the absence of Condition (C) effect in (13) shows:

- (13) a. El novio de Lea_i la_i besó en (Spanish)
the boyfriend of Lea CL.her kiss.PAST.3.SG in
la calle.
the street
‘Lea’s boyfriend kissed her in the street.’
- b. *La_i besó en la calle el novio (Spanish)
CL.her kiss.PAST.3.SG in the street the boyfriend
de Lea_i.
of Lea
‘Lea’s boyfriend kissed her in the street.’ [from Suñer 2003:349]

⁵ With Chomsky (2000:110, 2007:17, 2008:147–148, 150), I am assuming that A and A-bar movements (and A/A-bar chains) are not defined configurationally (by the position they occupy), but by the type of Probe that triggers them. Hence, A-movement is triggered by φ -features, whereas A-bar-movement is triggered by what Chomsky (2008:139) dubs *edge feature* EF (alternatively, EPP/P(eripheral)-feature in 2000:102,144, and OCC(urrence)-feature in 2004:112).

⁶ In Chomsky (1995) and Lasnik (1999), the conceptual motivation behind A-bar movement leaving a trace is that the resulting object requires two elements (the moved item and its copy) to instantiate an operator-variable relation. No such (semantic) rationale can be adduced for A-movement. The first-Merge copy of A-movement is only needed if one endorses a configurational view of theta roles (like Hale & Keyser’s 2002), but it is not if theta roles are seen as features (see Bošković & Takahashi 1998; Hornstein 2001; Lasnik 1999).

Together with the facts in (12) and (13), consider the observation from Boeckx (1999, 2001) that A-movement can feed reconstruction under some circumstances. This can be seen in the following examples, where *some politician* reconstructs below *likely*, and *himself* is bound by *John*:⁷

- (14) a. [_{CP} [_{TP} Some politician_i T is likely to [_{t_i} address John's constituency]]].
 b. [_{CP} [_{TP} Pictures of himself_i T seem to John to be [_{t_i} ugly]]].

The data in (14) therefore indicate that A-movement does actually leave copies capable of feeding reconstruction. Boeckx (2007:29–34) provides additional evidence that A-movement creates uniform paths. The first datum goes back to Chomsky (1981:44–45), where it is suggested that Condition (A) is satisfied in (15) by means of intermediate A traces: assuming binder and bindee must be clause-mates, *they* must stop at some position above *each other* but below *likely*.

- (15) [_{CP} C [_{TP} They_i T are likely [_{TP} t_i to appear to each other [_{TP} t_i to be happy]]]]].

Lasnik (2006:210), attributing the example to Adolfo Ausín, provides (16), which leads to the same conclusion:

- (16) [_{John_i} appears to Mary [_{t_i} to seem to {himself/*herself} [_{t_i} to be [_{t_i} the best candidate]]]]].

As Lasnik (2006) notes, if *John* did not stop in the SPEC-T position of the *seem*-clause, *himself* would have to be freed from Condition (A) satisfaction, while *herself* would be obeying it at the same time.

For the purposes of this paper, the question that must be asked next is whether there is any other type of test, apart from reconstruction effects (and, of course, inversion, quantifier float, etc.), to ascertain whether A-movement paths are uniform. Chomsky (2008) speculates so, arguing that intermediate steps can be used to circumvent CED effects (see next section for details).

⁷ For unclear reasons, this effect is not found in Spanish, where, as Suñer (2003:345–349) points out, indefinites fail to reconstruct in Condition (C) contexts. As the unreported examples in (i) and (ii) show, indefinites do behave as expected in Condition (A) contexts. I assume here, with Torrego (1998), that Case-marked objects raise above the subject, so that the latter can leave a copy behind:

- (i) ?Unas fotos de sí mismo_i parecían incriminar a Juan_i. (Spanish)
 some pictures of SELF same appear.PAST.3.SG incriminate.INF to Juan
 'Some pictures of himself appeared to incriminate Juan.'
 (ii) *Las fotos de sí mismo_i parecían incriminar a Juan_i. (Spanish)
 the pictures of SELF same appear.PAST.3.SG incriminate.INF to Juan
 'Some pictures of himself appeared to incriminate Juan.'

There are some asymmetries between A- and A'- movement with regard to local steps. One is that the reconstruction effects are far weaker for A-movement (if they exist at all). The only strong argument for local steps for A-movement are those based on binding and (as discussed above) extraction. In the latter case, the argument supports only the option, but not the necessity, of the local step. In both cases the effects hold only at SPEC-T, hence fall within the EPP category. [Chomsky 2008:156]

Following an observation by John Frampton, Chomsky (2008) departs from Boeckx's (2007) uniform approach to paths. The reason is largely empirical: if A-movement created uniform paths, then the *Subject Condition* could be circumvented by adding an extra A-landing site (say, the specifier of a modal or auxiliary):

Furthermore, there is strong evidence that raising of EA to SPEC-T does not pass through intermediate positions (hence presumably that A-movement never does). If there were intermediate positions between the base and surface position in this case (say, at the edge of a participial phrase), then subject-island effects would be obviated, exactly as they are in successive-cyclic (and ECM) raising. [Chomsky 2008:156]

Chomsky's quote deserves qualification and some background discussion. I provide it in the following sections.

3. CED effects and phase edges

In this section I spell-out Chomsky's (2008) phase-based analysis of the *Subject Condition*, considering some empirical evidence – first noticed by Uriagereka (1988), and later explored by Gallego & Uriagereka (2007) – threatening it. The discussion is rounded up by addressing arguments put forward by Fortuny (2008) that support Chomsky's (2008) proposal, and pose a problem for both Uriagereka (1988), and Gallego & Uriagereka (2007).

3.1. Chomsky's (2008) analysis of the Subject Condition

As pointed out in section 1, it is a well-known fact that subjects behave as opaque domains. More precisely, the surface position of subjects (SPEC-T) appears to block extraction:

- (17) *_{[CP} Of which car_i did _{[TP} [the (driver, picture) t_j]_T _{[v*P} t_j v*
 cause a scandal]]]? [from Chomsky 2008:147]

Once the original formulation of Huang's (1982) CED (which resorted to the notion of *government*) became unavailable, the minimalist literature explored different routes to account for data along the lines of (17). The leading idea behind most analyses that I am familiar with (see Boeckx 2003; Ormazabal et al. 1994; Rizzi 2006; Stepanov 2001, 2007; Takahashi 1994; among others) is that SPEC-T is a freezing position, a node that

‘switches off’ the subject DP (see Chomsky 2000:123, 2001:6, 2008:150).⁸ For concreteness, consider Chomsky’s (2000) formulation of the *Activity Condition*:⁹

(18) *Activity Condition*

- a) DPs with structural Case are *active*.
- b) A-movement (triggered by ϕ -Probes) renders active DPs *frozen*, unable to move or allow movement of their constituents.

Chomsky (2008) offers a radical departure from these freezing accounts, by adopting the phase cycle assumptions put forward in Chomsky (2001). In such an account, the derivation of a sentence like (17) is decomposed as involving two ordered steps: first, the subject DP A-moves to SPEC-T, and second, the wh-phrase A-bar moves (from SPEC-T) to SPEC-C. As mentioned at the outset of this paper, Chomsky (2001:27–28, 2004:123, 2008:147–148) departs from such a step-by-step conception of cyclicity: there is only one cycle, the phase cycle. Accordingly, all operations within a phase apply at the phase level, after the phase head is introduced, with apparent countercyclic operations being concealed (i.e. masked by phase dynamics):¹⁰

Spell-Out applies at the phase level (by definition), and as discussed, all operations within the phase are in effect simultaneous. Furthermore, their applicability is evaluated at the phase level, yielding apparent countercyclic effects within the phase. [from Chomsky 2004:123]

Chomsky (2001) provides one empirical argument in favor of the phase cycle. As he points out, the sentence in (19) predicts an intervention effect if minimality is calculated before C is merged:

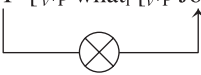
(19) [_{CP} What_i C did [_{TP} John_j T [_{v*P} t_i [_{v*P} t_j v* say t_i]]]]?

More specifically, Chomsky (2001) notes that, at the point in which T is merged, *what* (once moved to SPEC-*v**) intervenes between T’s ϕ -Probe and *John*. If minimality were computed when T is merged, (19) would be ruled out. This process would run as indicated below:

⁸ It is important to emphasize that freezing is not triggered by Case assignment alone (we will see that subjects and objects left *in situ* behave as transparent domains), but to movement into a person-checking specifier. See Boeckx (2008a) and Uriagereka (2006) for much related discussion.

⁹ The intuition behind the *Activity Condition* virtually subsumes all the relevant accounts of the *Subject Condition*. These go back to Wexler & Culicover’s (1981) *Freezing Principle*, which relates islandhood to derived positions (see Stepanov 2001:52). Similar consequences are found in Uriagereka’s (1999a) *Multiple Spell-Out* framework, but in a more drastic fashion, as even the first complex specifier is an island.

¹⁰ Noam Chomsky (p.c.) points out to me that the fact that operations apply at the phase level does not entail that there is no ordering between them. Put another way: apart from external Merge, all other operations (internal Merge and Agree) cannot take place until the relevant phase head is merged. See Chomsky (2007) for related qualifications, one of which concerns the possibility that ϕ -feature inheritance precedes ϕ -feature valuation, so that Probe-Goal search is reduced.

- (20) a. [_{v*P} John v* [_{VP} say what]]?
 b. [_{v*P} what_i [_{v*P} John v* [_{VP} say t_i]]]? *movement of what to SPEC-v**
 c. [_{TP} T [_{v*P} what_i [_{v*P} John v* say t_i]]]? *merger of T*
 d. [_{TP} T [_{v*P} what_i [_{v*P} John v* say t_i]]]? *Agree (T, John) → intervention*
- 

Crucially, if minimality is evaluated after C is introduced (at the phase level), the problem goes away, for *what* has already moved to SPEC-C by then.¹¹

Assuming this much, Chomsky (2008) offers the minimal pair in (21) to cast doubt on freezing-based formulations of the *Subject Condition*.¹²

- (21) a. *[_{CP} Of which car_i did [_{TP} [the (driver, picture) t_i]_j T [_{v*P} t_j v* cause a scandal]]]]?
 b. [_{CP} Of which car_i was [_{TP} [the (driver, picture) t_i]_j T [_{vP} v awarded t_j a prize]]]?

[from Chomsky 2008:147]

Chomsky (2008) correctly observes that the data in (21) are at odds with the *Subject Condition* arising at SPEC-T, for that would predict both examples to be out. Given that in his system C can target the subject in its first-Merge position, SPEC-v*, Chomsky (2008) concludes that it must be edges that create a locality problem:¹³

¹¹ Following Chomsky (2000, 2001), I am assuming that traces do not count as interveners, an idea that goes back to Uriagereka (1988). In this respect (and in order to answer an anonymous reviewer’s question), let me clarify that I am assuming a fairly standard definition of minimality. This can be seen in (i) below, where B would intervene between A and C (“>” indicates c-command):

(i) A > B > C

¹² Acceptability in this domain is very subtle and controversial. Actually, even the non-degraded sentences are far from perfect, since pied-piping is not a natural option for English speakers, as Noam Chomsky points out (p.c.). Related to this, an anonymous reviewer points out that one should carry out (or consult existing) careful empirical investigations of subtle extraction data (that rely on techniques like magnitude estimation) before drawing far-reaching theoretical conclusions in this domain. I agree and refer the reader to Sprouse (2007), who shows that experimental work, though interesting and complementary to theoretical investigation, does not lead us to change our picture of islands – in fact, it supports it.

¹³ In Chomsky (2000:144) it is speculated that subject extraction is related to the PIC. Nevertheless, the problem in Chomsky (2001) appears to deal with embedding depth, and may be formulated in node counting terms. Noam Chomsky elaborates on this through personal communication, noting that “extraction from within SPEC of a phase already passed poses a locality problem, by definition. It’s necessarily not only to search into the exterior of the phase already passed [...] but also one level of depth further, into the interior of that exterior”.

Consider the subject-island subcase. It has been assumed since Huang's discovery of these properties that the surface subject is the island, but there is reason to doubt this assumption [...] the effect is determined by the base structures of [...] not the surface structures [...] [I]t remains to explain why the probe for wh-movement cannot readily access the wh-phrase within the external argument of α . That could reduce to a locality condition: *which* in α is embedded in the lower phase, which has already been passed in the derivation. We know that the external argument itself can be accessed in the next higher phase, but there is a cost to extracting something embedded in it. [from Chomsky 2008:147–148]

Gallego & Uriagereka (2007) propose the *Edge Condition* in (22) to capture the hypothesis that edges freeze the internal part of subject DPs:

(22) *Edge Condition*

Syntactic Objects in phase edges are internally frozen

[from Gallego & Uriagereka 2007:55]

As Gallego & Uriagereka (2007) observe, something like the *Edge Condition*, though plausible, makes wrong cross-linguistic predictions. In particular, we note that it is easily circumvented in Spanish, where subextraction from post-verbal subjects appears to be possible, as originally noted by Uriagereka (1988):¹⁴

¹⁴ Uriagereka (in progress) provides new data in order to make the same point. The interesting aspect of this new evidence is that subjects are entire clauses, but subextraction is possible regardless:

(i) ?_{[CP} Qué partido_i te hizo gritar [(el) que (Spanish)
 what game CL.YOU make.PAST.3.SG scream.INF the that
 hayas perdido t_i]]?
 have.2.SG lost

'Which game has it made you scream that you lost?'

(ii) Este es el partido [Op_i que le hizo llorar [el (Spanish)
 this be.3.SG the game that CL.him make.PAST.3.SG cry.INF the
 perder t_i]]?
 lose.INF

'This is the game that it made him cry losing.'

As Uriagereka observes, the relevant thing about (i) and (ii) is that there is no possibility for the wh-phrases to be reanalyzed as aboutness dependents (see Gallego 2007 for discussion).

On a related note, it is worth pointing out the possibility that subextraction be possible here because of the focal reading of post-verbal subjects (see Belletti 2004; Ordóñez 1997, and Uriagereka in progress). Uriagereka (in progress) actually provides an unnoticed paradigm that shows that the focal particle *hasta* (Eng. *even*) makes subextraction (from preverbal subjects, see iii) substantially better.

(iii) ?_{[CP} Qué partido_i piensas que [_{TP} el perder t_i] ?*(hasta) le (Spanish)
 what game think.2.SG that the lose.INF even CL.him
 hizo llorar]]?
 make.PAST.3.SG cry.INF

'What game do you think that losing even made him cry?'

Compare (iii) with (iv), where, as Uriagereka points out, *hasta* has the opposite effect if the subject is in a post-verbal position.

- (23) [CP De qué conferenciantes_i C te parece que ...
of what speakers CL.to.you seem.3.SG that
a. ... (?)<sub>[TP T me van a impresionar [las (Spanish)
CL.to.me go.3.PL to impress.INF the
propuestas t_i]]]?
proposals
b. ... *<sub>[TP [las propuestas t_i] T me van a t_j (Spanish)
the proposals CL.to.me go.3.PL to
impresionar]]]?
impress.INF
‘Which speakers does it seem to you that the proposals by will
impress me?’ [from Uriagereka 1988:118]</sub></sub>

The importance of examples like (23a) lies in the fact that the post-verbal subject occupies the first-Merge position of a transitive predicate, SPEC-*v**, a phase edge. The prediction under Chomsky’s system, therefore, is that (23a) should be out.

Similar observations are made by Broekhuis (2006), who provides Dutch data involving the *wat-voor* split. Just like in the Spanish examples, the contrast between (24a) and (24b) shows that subextraction from subjects is possible if they stay within the *v**P, i.e. in their first-Merge position, SPEC-*v**.

- (24) a. [CP Wat_i C hebben [TP er T [_v*P [t_i voor mensen] *v** (Dutch)
what have.3.PL EXPL for people
je moeder bezocht]]]?
your mother visited
‘What sort of people have visited your mother?’
b. *<sub>[CP Wat_i C hebben [TP [t_i voor mensen]_j T [_v*P t_j *v** (Dutch)
what have.3.PL for people
je moeder bezocht]]]?
your mother visited
‘What sort of people have visited your mother?’
[from Broeckhuis 2006:65]</sub>

(24a), then, is a first problematic datum for Chomsky’s (2008) analysis, since insertion of the expletive *er* in SPEC-T prevents subject raising.

- (iv) [CP Qué partido_i piensas que (*hasta) le hizo (Spanish)
what game think.2.SG that even CL.him make.PAST.3.SG
llorar [TP el perder t_i]]]?
cry.INF the lose.INF
‘What game do you think that it even made him cry losing?’

I have no explanation for the contrast between (iii) and (iv), and it certainly does not follow from any of the strategies I have considered in the preceding pages. I refer the reader to Uriagereka (in progress) for discussion.

Given that the subject remains in SPEC- v^* , subextraction is expected to be ruled out by Chomsky, contrary to fact.

A second problematic datum for Chomsky's account comes from derived subjects (i.e. internal arguments) that block subextraction when promoted to SPEC-T, as the Dutch data in (25) indicate:

- (25) a. [_{CP} Wat_i C zijn [_{TP} (er) T [_{vP} v jouw vader [_{t_i} voor (Dutch)
 what be.3.PL EXPL your father for
 rare verhalen] verteld]]]]?
 strange stories told
 'What kind of strange stories have been told to your father?'
 b. *[_{CP} Wat_i C zijn [_{TP} [_{t_i} voor rare verhalen]_j T [_{vP} v (Dutch)
 what be.3.PL for strange stories
 jouw vader t_j verteld]]]]?
 your father told
 'What kind of strange stories have been told to your father?'
 [from Broeckhuis 2006:64–65]

Under Chomsky's (2008) analysis, it is not clear why (25b) should be out if C's edge-Probe can, after all, target *wat* in its base position; since there is no (strong) phase boundary, the PIC would be irrelevant here, and C could thus probe bypassing v .

The overall scenario is reinforced by additional data from Spanish. Consider (26), where subextraction from a base object is degraded if it ends up in SPEC-T.

- (26) a. [_{CP} De qué coche_i parece que [_{TP} T [_{vP} (Spanish)
 of what car seem.3.SG that
 ya v ha llegado [el conductor t_i]]]]?
 already have.3.SG arrived the driver
 'Of which car does it seem that the driver has already arrived?'
 b. ??[_{CP} De qué coche_i parece que [_{TP} [el (Spanish)
 of what car seem.3.SG that the
 conductor t_i]_j T [_{vP} ya v ha llegado t_j]]]]?
 driver already have.3.SG arrived
 'Of which car does it seem that the driver has already arrived?'

To recap so far, the evidence accumulated by Gallego & Uriagereka (2007) suggests an approach to the *Subject Condition* that capitalizes on SPEC-T as a freezing node, which, at first glance challenges Chomsky's (2008) two claims that, one, all operations apply in parallel (at the phase level), and two, phase edges trigger syntactic opacity.

Some additional factors about the *Subject Condition* have been recently addressed in Fortuny (2008), where arguments against Gallego & Uriagereka's (2007) analysis are provided. Since the arguments raised by Fortuny are relevant to the present discussion, I consider them in the next section.

3.2. The structure of v^*P and aboutness base generation

As just noted, both Dutch and Spanish appear to circumvent CED effects as long as subjects remain within the v^*P , in a non-freezing position. In this section I go through Fortuny's (2008) observations against Gallego & Uriagereka's (2007) analysis of the *Subject Condition* – empirically, these largely concern Catalan and Spanish, but they merit attention on theoretical grounds nonetheless.

Fortuny (2008) concentrates on three aspects of Uriagereka's (1988) original examples: (i) the fact that they involve transclausal subextraction; (ii) the status of the subextracted PP; and (iii) the base structure of the v^*P . Consider the last issue first.

Among the factors that may play a role in most accounts of CED effects, the question of whether islandhood has a structural nature may be particularly relevant (e.g. the specifier/adjunct vs. complement distinction; see Uriagereka 1999a).¹⁵ In this regard, as Fortuny (2008) points out, it is important to make sure whether the base configuration of the v^*P where the subject is first merged has any bearing on subextraction. There is evidence to suggest that it does. In fact, Chomsky (2008:160 fn. 39) notes that “[the] choice of v^* may have an effect. Perhaps “of which books did the author receive a prize?” is more acceptable than [of which car did the driver cause a scandal?].” Chomsky (2008) does not say ‘how much better’ the first version is, but let us nonetheless assume a */? contrast (see also fn. 12):

- (27) a. ?_{[CP} Of which books_i C did _{[TP} [the author _{t_i]} T _{[v*P} t_j v*
receive a prize]]]?
- b. *_{[CP} Of which car_i C did _{[TP} [the driver _{t_i]} T _{[v*P} t_j v* cause a
scandal]]]?

Chomsky (2008) suggests that the difference between *receive* and *cause* follows from the flavor of v^* , but he does not elaborate on how such a semantic trait bears on subextraction. Fortuny (2008) does elaborate, by taking the subject of *impresionar* (Eng. *impress*) to be generated in the search domain of the phase head – hence below v^* . In this way, Fortuny (2008) seems to tacitly adopt Belletti & Rizzi's (1988) hypothesis that object-experiencer verbs have an unaccusative structure, whereby the internal argument is first-merged in a position lower than the experiencer.

Plausible as it may be, this idea is convincingly refuted by Arad (2002), who provides a comprehensive analysis of psych-predicates. According to

¹⁵ Chomsky (2008:147) is one such case, as it adopts a configurational approach to the *Adjunct Condition* by assuming that “adjunct[s] [are] not in the search domain of the probe,” which “in turn follows from the approach to adjuncts in [Chomsky 2004], taking them to be entered into the derivation by pair-Merge instead of set-Merge.”

Stated differently, the possibility of *impresionar* to passivize constitutes strong evidence that it qualifies as a full-fledged transitive verb, assigning accusative Case (and not necessarily dative, *as per* Arad 2002) in its active version. The example in (31) reinforces this conclusion, as the object clitic receives accusative Case even if the subject does not yield an agentive reading:

- (31) Los cuadros de Picasso lo (Spanish)
 the paintings of Picasso CL.him.ACC
 impresionaron profundamente.
 impress.PAST.3.PL deeply
 ‘Picasso’s paintings deeply impressed him.’

In sum, these data strongly indicate that the subject of *impresionar* is, for all intents and purposes, the specifier of a ϕ -complete v^* . Consequently, there is no relevant formal asymmetry between the position that subjects of verbs like *impress* or *cause* occupy; both start off in phase edges.

Let us now consider the status of the subextracted PP. Following Chomsky (2008), Fortuny (2008) points out that the subextracted dependent may not be an argument, but a species of modifier (in Broekhuis’s terms, a ‘restrictive adverbial phrase’).¹⁸ Such an intriguing (re)analysis is particularly productive in the case of *picture DPs*, which, according to Chomsky (2008), are not good candidates for extraction tests.

In the oral tradition, including talks of mine, examples have kept to “picture-PP,” but that lexical choice introduces extraneous issues because of the ambiguity of the phrase, which can be understood with PP interpreted not as a complement of “picture” but as, in effect, a reduced relative clause (roughly, “I have a picture which is of Boston,” contrary to *“I saw a driver who is of the car,” [*]“I saw an author who is of the book”).
 [from Chomsky 2008:160 fn. 38]

Fortuny (2008:146) proposes the structures in (32) to capture this distinction:

- (32) a. [DP PP] *symmetric structure (reduced relative)*
 b. [DP [PP]] *nested structure (argument)*

If I interpret (32) correctly, Fortuny’s (2008) point amounts to there being no subextraction in Uriagereka’s examples, since the subject DPs can be given a reduced relative paraphrase: *las propuestas de los conferenciantes – las propuestas que son de los conferenciantes* (Eng. *the*

¹⁸ In Gallego (2007), it is shown that the data noticed in Torrego (1985) involves this type of external base generation, where the PPs are referred to as ‘aboutness dependents’.

proposals which are of the speakers).¹⁹ That such a paraphrase is possible certainly opens the door for there being no subextraction whatsoever.

There are grounds, though, to be skeptical of this possibility as well. First, it is not clear at all whether the argument vs. adjunct distinction within the DP can be compared to the one within the clause.²⁰ Second, Fortuny's (2008) idea seems to go against the generalization that it is impossible to extract adjuncts, not arguments, out of DPs, as the paradigm in (33) indicates (see Ticio 2005 and references therein):

- (33) a. [_{CP} Who_i C do you like [a picture of t_i]]?
 b. *_{[CP} Which table_i C did you like [a book [on t_i]]]?
 c. *_{[CP} On which table_i C did you like [a book t_i]]?
 [from Ticio 2005:243]

Of course, one could still argue that reduced relatives are something of a secondary predication, ultimately different from adjuncts. Though tempting, this solution would fall short of explaining why DP-secondary predicates cannot precede DPs, if they do not occupy an embedded position to begin with. This is shown in (34) below (a topic-like reading for the PP in 34b should be ignored).

- (34) a. [Las propuestas] [de Chomsky y Kayne] (Spanish)
 the proposals of Chomsky and Kayne
 me impresionarán.
 CL.to.me impress.FUT.3.SG
 'The proposals by Chomsky and Kayne will impress me.'
 b. *[De Chomsky y Kayne] [las propuestas] (Spanish)
 of Chomsky and Kayne the proposals
 me impresionarán.
 CL.to.me impress.FUT.3.SG
 'The proposals by Chomsky and Kayne will impress me.'

¹⁹ This may well explain why subextraction is better in the following Spanish examples:

- (i) (?)_{[CP} De qué equipo_i han protestado [muchos jugadores t_i]]? (Spanish)
 of what team have.3.PL protested many players
 'Which team have many players of protested?'
 (ii) (?)_{[CP} De qué universidad_i C te respetan [muchos estudiantes t_i]]? (Spanish)
 of what university CL.you respect.3.PL many students
 'Which university do many students of respect you?'

Note that, in all cases, a reduced relative paraphrase is possible: *los jugadores del equipo* – *los jugadores que son del equipo* (Eng. *the players who are of the team*) and *los estudiantes de la universidad* – *los estudiantes que son de la universidad* (Eng. *the students who are of the university*).

²⁰ Notice, for instance, that all DP-internal dependents are introduced by a preposition, so one cannot rely on the presence of a preposition to determine their status. When it comes to the argument vs. adjunct distinction within the DP most tests are in fact related to semantic intuitions that are hard to translate into formal terms. See Pesetsky & Torrego (2004) and Ticio (2005) for discussion, among many others. The picture is compounded if Kayne (2008) and Mateu (2002) are right in assuming that nouns cannot take complements.

Spanish allows for such a reverse order to be generated in clausal environments (e.g. *Considero a Juan inteligente* and *Considero inteligente a Juan*; Eng. *I consider Juan intelligent*), so it is not immediately obvious why a counterpart within the nominal domain should be barred. As all these points make clear, it is rather unlikely that the argument vs. adjunct asymmetry has anything relevant to say about extraction out of DPs, at least until we understand this distinction better.

But this said, and even if Chomsky's (2008) claim about the status of the subextracted PP is irrelevant for the facts considered up to this point, it must be acknowledged that subextraction from post-verbal subjects is much worse when it takes place in a mono-clausal environment (also noted by Uriagereka 1988:122).²¹ This point, which brings us to Fortuny's (2008) last observation, is illustrated in (35):

- (35) ??[_{CP} De qué coche_i C ha ganado dos (Spanish)
of what car have.3.SG won two
carreras [el piloto t_i]]?
races the driver
'Of which car has the driver won two races?'

Typically, questions like (35) are better formulated as in (36), which invokes a heavy pied-piping strategy:

²¹ Jordi Fortuny (p.c.) agrees with Uriagereka's (1988) original pair, but he believes that the effect can be related to the interaction between wh-movement and preverbal subjects. In other words, the degraded outcome of subextraction from preverbal subjects could be due (according to Fortuny) to the fact that wh-movement in transclausal contexts is worse if subjects are in a preverbal position.

A very similar claim was made in Torrego (1984), where preverbal subjects were said to create weak island effects (see also Uriagereka 1999b).

- (i) * [_{CP} Qué_i pensaba Juan [_{CP} que Pedro le ... (Spanish)
what think.PAST.3.SG Juan that Pedro CL.to.him
... había dicho [_{CP} que la revista había publicado t_i]]?
have.PAST.3.SG said that the journal have.PAST.3.SG published
'What did Juan think that Pedro had told him that the journal had published?'
- (ii) * [_{CP} Con quién_i sabía Juan [_{CP} que Ana ... (Spanish)
with whom know.PAST.3.SG Juan that Ana
... había admitido [_{CP} que Pedro había hablado t_i]]?
have.PAST.3.SG admitted that Pedro have.PAST.3.SG talked
'Who did Juan know that Ana had admitted that Pedro had talked to?'
- [from Torrego 1984:108–109]

Although I do not share Torrego's (1984) judgments (these sentences being stylistically marked, not unacceptable), a most worrying issue is that it is not clear how to formalize the conflict between wh-extraction and preverbal subjects. Perhaps morphological properties of phase heads impose a restriction on how many specifiers can be created (see Gallego 2007 for related ideas).

- (36) ?[_{CP} El piloto de qué coche_i C ha ganado (Spanish)
 the driver of what car have.3.SG won
 dos carreras t_i?
 two races
 ‘The driver of which car has won two races?’

Yet more puzzling is the fact that subextraction is totally out if the subject occupies a non-final position, for reasons I fail to see:²²

- (37) *[_{CP} De qué coche_i C ha ganado [el (Spanish)
 of what car have.3.SG won the
 piloto t_i] dos carreras]?
 driver two races
 ‘Of which car has the driver won two races?’

As Fortuny (2008) points out, the facts carry over to Catalan, where subextraction from subjects is impossible, and considerably worse than in Spanish:²³

- (38) a. *[_{CP} De quina pel.lícula_i va provocar (Catalan)
 of which movie go.3.SG cause.INF
 [el director t_i] un escàndol]?
 the director a scandal
 ‘Of which movie did the director cause a scandal?’
 b. *[_{CP} De quina pel.lícula_i va provocar un (Catalan)
 of which movie go.3.SG cause.INF a
 escàndol [el director t_i]]?
 scandal the director
 ‘Of which movie did the director cause a scandal?’

[from Fortuny 2008:152]

Notice that, according to Gallego & Uriagereka’s (2007) analysis, it should be the case that the subjects in (35), (37), and (38) have moved to SPEC-T, triggering freezing, just like in (23b). Nevertheless, this conclusion crucially depends on where the verb moves in interrogative clauses, and there is no consensus on this point (see Gallego 2007 for a summary and discussion). For the sake of argument, let us suppose that the verb is above T – this may correspond to Uriagereka’s (1995) F, or C itself; if so, then post-verbal subjects in interrogative sentences may in principle occupy either SPEC-T or SPEC-*v**.

²² This may help explain the contrast between (35) and (37) above. Perhaps the subject occupies SPEC-T only in the latter case, being in some left peripheral position in (35). See Ordóñez (1997:128 ff.) for a different analysis.

²³ The difference between Catalan and Spanish with respect to subextraction from post-verbal subjects may be accounted for if Spanish can create more specifiers than Catalan, a possibility that can be resorted to in subextraction scenarios. I will not develop this possibility here.

Interestingly for our purposes, there is some evidence that subjects have in fact escaped from their first-Merge position in interrogatives. This is argued for by Belletti (2004), who proposes an analysis where subjects move to a TopicP located in v^*P 's left periphery.²⁴ The important thing is that, according to Belletti (2004:40), post-verbal subjects in interrogative and declarative sentences do not occupy the same position. In the latter case, they occupy a focus position, as first argued by Ordóñez (1997).

As Belletti points out, an important issue here is the possibility for there to be a constraint barring structures that feature a double focalization. Allegedly, this is the reason why the example in (39) is degraded, on a reading where *Gianni* is interpreted as new information (i.e. non-contrastive) focus:²⁵

- (39) *UN LIBRO ha letto Gianni. (Italian)
 a book have.3.SG read Gianni
 'Gianni has read A BOOK.' [from Belletti 2004:40]

Northern Italian dialects provide more evidence that post-verbal subjects in interrogative clauses do not occupy the same position that post-verbal subjects occupy in declarative sentences. As Belletti (2004) notes, a specific subject clitic may appear in declarative sentences; in interrogative sentences, a clitic shows up too, but it is morphologically different:

- (40) a. Gl'è venuto le su' sorelle. (Northern Italian)
 CL.it-be.3.SG come the his sisters
 'His sisters have come.'

²⁴ Uriagereka (in progress) argues that post-verbal subjects occupy a focus position in both declarative and interrogative sentences. This author develops an analysis whereby focus prevents Spell-Out of the external argument, allowing subextraction (recall the data from 23). Importantly, Uriagereka claims that the relevant structure is as in (i), in which the subject occupies SPEC-F (above TP) and the remnant TP is in an outer-SPEC-F:

(i) [FP [TP t_i ...] [F' [DP ...]_i F t_j]]

The analysis in (i) predicts that objects cannot c-command into subjects in VOS sentences where subextraction takes place. However, this is not borne out in (ii) below, which shows that binding into the subject (by the shifted object) and subextraction are compatible. For more general arguments in favor of objects c-commanding subjects in VOS sentences, see Gallego (2007).

(ii) [CP De qué novela_i te parece [CP que sorprendió ... (Spanish)
 of what novel CL.to.you seem.3.SG that surprise.PAST.3.SG
 ... [v^*P a todo escritor_j [v^* [DP el éxito de una traducción
 to every writer the success of a translation
 suya t_i] $v^* t_j$]]]?
 his
 'Which novel does it seem to you that the success of one of his translations surprised every writer?'

²⁵ If correct, this very restriction may be responsible for some of the data discussed by Ordóñez (1997). Since this matter goes beyond the goals of this paper, I put it aside.

- b. Quando l'è venuta la Maria? (Northern Italian)
 when CL.she-be.3.SG come the Maria
 'When has Maria come?' [from Belletti 2004:40]

Finally, post-verbal subjects in interrogative sentences give rise to crossover effects, contrary to those in declarative environments:

- (41) a. *?Attualmente, in un suo_i appartamento (Italian)
 at present in one his apartment
 vive Gianni_i
 live.3.SG Gianni
 'At present, Gianni lives in one apartment of his.'
- b. Attualmente, in quale suo_i appartamento (Italian)
 at present in which his apartment
 vive Gianni_i?
 live.3.SG Gianni
 'At present, in which apartment of his does Gianni live?'
 [from Belletti 2004:41]

Hence, if the subjects in (35), (37), and (38) do not occupy Spec-*v**, but a position higher up in the structure (whatever that is), then we have a plausible reason for subextraction to be worse in those cases than in (23a).

In this section I have addressed three potential problems noted by Fortuny (2008) for Gallego & Uriagereka's (2007) *Activity Condition*-based analysis. As we have seen, none of them really threaten Uriagereka's (1988) original observation that subextraction from post-verbal subjects in Spanish is acceptable.

4. Successive cyclic A-movement as an anti-freezing strategy

In this final section I investigate Chomsky's (2008) claim that the *Subject Condition* can be circumvented by means of successive cyclic A-movement, which, following Boeckx (2007), I take to operate much like A-bar movement: the moved element stops at each and every position before reaching its final landing site.

After introducing the basic facts, I want to propose a slight modification of Chomsky's (2008) analysis of the *Subject Condition* that combines the notion of freezing with the idea that all operations are evaluated at the phase level. I will then extend this proposal to the examples featuring successive cyclic A-movement.

4.1. *Anti-freezing and Kuno effects*

In stark contrast to the key pair in (21) (reproduced below as 42 for convenience), Chomsky (2008) notes that CED effects fade if subjects pass through non-freezing specifiers (those created by ϕ -defective heads

such as participles, or T in raising/ECM clauses). Thus, together with (42a), where subextraction of *of which driver* is impossible, both (43a) and (43b) appear to circumvent the *Subject Condition*:

- (42) a. * $[_{CP}$ Of which car_i did $[_{TP}$ [the (driver, picture) t_i]_j T $[_{v^*P}$ t_j v* cause a scandal]]]?
 b. $[_{CP}$ Of which car_i was $[_{TP}$ [the (driver, picture) t_i]_j T $[_{vP}$ v awarded t_j a prize]]]?

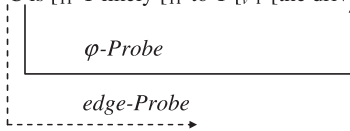
[from Chomsky 2008:147]

- (43) a. $[_{CP}$ Of which car_i C is $[_{TP}$ [the driver t_i]_j T likely $[_{t_j T}$ to $[_{t_j v^*}$ cause a scandal]]]]]?
 b. $[_{CP}$ Of which car_i C did they believe $[_{TP}$ [the driver t_i]_j $[_{t_j T}$ to $[_{t_j v^*}$ have caused a scandal]]]]]?

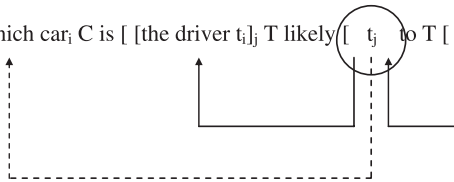
[from Chomsky 2008:153]

In (43), *the driver of which car* undergoes successive cyclic A-movement from its base position to matrix SPEC-T. Chomsky (2008) argues that an (indiscriminate or Match free) edge-*Probe* launched by matrix C can target the *wh*-chunk *of which car* along the A-movement path of the subject, with operations interweaving. This is illustrated in (44), which corresponds to the raising case in (43a):

- (44) a. $[_{CP}$ C is $[_{TP}$ T likely $[_{TP}$ to T $[_{v^*P}$ [the driver of which car] cause v* a scandal]]]]?



- b. [Of which car_i C is $[_{TP}$ [the driver t_i]_j T likely $[_{t_j T}$ to T $[_{t_j v^*}$ cause v* a scandal]]]]?



The examples in (44) argue in favor of a phase cycle approach to operations, with matrix C triggering A and A-bar movements simultaneously, after this head is introduced.²⁶ Notice that if *wh*-movement took place from the last A-chain position of the subject (in a strictly cyclic fashion), subextraction would be doomed, due to freezing.

With this intriguing pair in mind, let us go back to (42), specifically to (42b), which, according to Chomsky, is acceptable. Taking the judgment to be correct, we are forced to conclude that subextraction takes place from a non-freezing specifier as well –the issue is which one. The interest

²⁶ This conception assumes that structure is created before movement takes place. See Boeckx (2007:ch.4) for arguments that operations apply as soon as possible, without waiting until the phase level.

of (42b) increases when compared to (45), taken from Chomsky (1995:328), for they are almost identical, except for pied-piping.

(45) *_{[CP Who_i C was _{[TP [a picture of t_i] T [_{vP} v taken t_j by Bill]]]]?}}

Attributing the original observation to Kuno (1973), Chomsky (1986) suggests that subextraction and pied-piping are somehow connected (see also Chomsky 2008:160 fn. 38). To address this asymmetry more carefully, consider (46), where both pied-piping and stranding yield an acceptable result as long as the subextraction domain is left *in situ*.

(46) a. <sub>[CP Of who_i C did _{[TP you T call up [a friend t_i]]]]?}
 b. _{[CP Who_i C did _{[TP you T call up [a friend of t_i]]]]?}}</sub>

The examples in (47), taken from Kuno (1973), are the flipside of (46), since they show that subextraction from an already displaced constituent is licit only if it involves pied-piping:

(47) a. *<sub>[CP Which words_i C is _{[TP [learning the spellings of t_i] T [t_j difficult]]]]?}
 b. ?_{[CP Of which words_i C is _{[TP [learning the spellings t_i] T [t_j difficult]]]]?}}</sub>

[from Kuno 1973:379]

The asymmetry between (46) and (47) poses a puzzle, for the position we identified as triggering freezing effects (SPEC-T) allows, it would appear, subextraction when pied-piping is involved.

In his paper, Kuno argued for a solution that capitalized on the ‘incomplete’ status of the domain from which subextraction takes place. Roughly put, DPs of the form [D [N *of* t]] were considered ‘incomplete,’ and hence islands (see Kuno 1973:380). Since I fail to see any non-stipulative way of recasting Kuno’s intuition, I will simply present the descriptive generalization as follows:

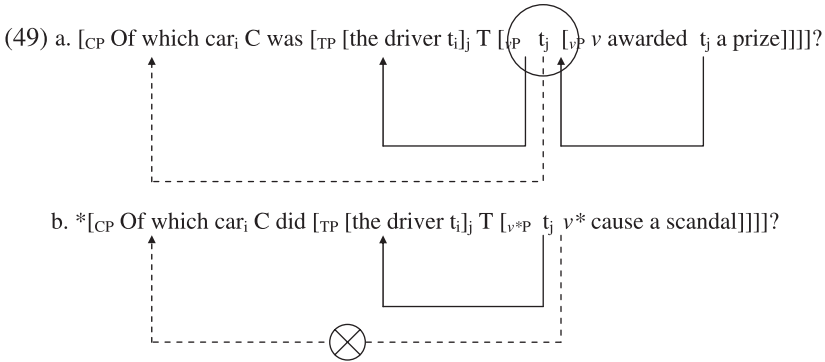
(48) *Kuno’s Generalization*

Incomplete DPs are only licit if left in their first-Merge position

In order to account for the contrast between (46) and (47), Gallego & Uriagereka (2007) claim that subextraction in (42b) takes place from SPEC-*v*. Their reasoning goes as follows: since subextraction cannot have occurred from the final landing site (SPEC-T) – because of freezing –, and it cannot have occurred from the first-Merge position either – which would predict the stranding version to be grammatical, just like in the case of subextraction from object DPs (see 46 above) –, these authors conclude that *of which car* is subextracted from a non-freezing specifier: SPEC-*v*.

Given that there is no such intermediate, non-freezing, position in (42a), subextraction is correctly ruled out. The relevant structures are

offered below: (49a) is (42b), where subextraction is possible due to the availability of a non-freezing specifier, and (49b) is (42a).



An appealing advantage of this solution is that it appears to fit with the observation by Postal (1974) that stranding is disallowed in intermediate positions:

- (50) a. [_{CP} Who_i C do you think [_{CP} (that) John talked [_{PP} to t_i]]]?
 b. * [_{CP} Who_i C do you think [_{CP} [_{PP} to t_i]_j (that) John talked t_j]]?

There is, however, another way of looking at Chomsky's (2008) data, and it follows from taking freezing effects to be evaluated, like all operations, at the phase level. Consider (42b) one more time, repeated now as (51):

- (51) [_{CP} Of which car_i was [_{TP} [the (driver, picture) t_i]_j T [_{vP} v awarded t_j a prize]]]?

If we 'zoom in' on the vP, and stop the derivation momentarily, (52) obtains. In this example, I assume that v has triggered movement of the wh-phrase and the object itself, forming two independent chains.

- (52) [_{vP} Of which car_i [_{vP} [the (driver, picture) t_i]_j v awarded t_j a prize]]?

Given that v is defective, and does not count as a strong phase head (see Boeckx 2008c; Marantz 2007 and Richards 2004 for qualifications), structural Case is not assigned to the object, which is still active at this derivational stage. Let us suppose that Chomsky's (2000) [\pm active] property holds within a given cycle, affecting all the relevant dependents, which includes, in the case at hand, all the copies of the object. If all the occurrences of a chain within a phase (be it strong or weak) run the same fate (see Chomsky 2000:116, 2008:145), successful subextraction in (42b) is allowed: as the A-chain created within the vP is not frozen (due to v's defective status), subextraction of the wh-phrase is not barred.

What about (42a)? In this case, the subject DP moves to SPEC-T within the CP phase (see 53), which, being φ -complete, does yield freezing:

- (53) * $[_{CP}$ Of which car_i did $[_{TP}$ [the (driver, picture) t_i]_j T $[_{v^*P}$ t_j v^{*} cause a scandal]]]?

In a nutshell, what this analysis proposes is that freezing be evaluated phase by phase. If freezing (Chomsky's *Activity Condition*) is evaluated in this way, then all the occurrences of the A-chain in (53) become frozen too, rendering the DP subject opaque across the board, with the effect holding for the lower copy in SPEC- v^* . Viewed this way, the first-Merge position of the subject induces opacity effects (as Chomsky 2008 argues), but only in an indirect fashion, because of phase level freezing.

I believe that this solution provides a more coherent cross-linguistic scenario. This is so because, as we have seen, the Dutch and Spanish data are incompatible with Chomsky's (2008) claim that phase edges yield island effects in and of themselves. Under the analysis I have just sketched, Dutch and Spanish avoid the *Subject Condition* because, at the phase level, the subject remains in SPEC- v^* , a non-freezing specifier.

This account also proves superior to Gallego & Uriagereka's (2007), which assumes subextraction in (42b) to take place from SPEC- v . But this is problematic: how come C can target SPEC- v , but not SPEC- v^* ? Granted, one could still claim that the former position does not qualify as a *bona fide* phase edge (as it is φ -defective), this being what counts for subextraction to be ruled out. Facts like (54a), where the subject DP arguably remains in SPEC- v , appears to support this idea:

- (54) a. $[_{CP}$ Which candidate_i C were $[_{TP}$ there T $[_{vP}$ v [posters of t_i all over the town]]]?
- b. * $[_{CP}$ Which candidate_i C were $[_{TP}$ [posters of t_i]_j T $[_{vP}$ v t_j all over the town]]]?

[from Lasnik & Park 2003:651]

To make sure whether Chomsky's (2008) analysis is correct we need to find cases where the verb qualifies as transitive, and the subject remains in its first-Merge position. This configuration is not easy to find, since English, unlike e.g. Icelandic, lacks *Transitive Expletive Constructions*. However, as Mark Richards (p.c.) observes (see Richards 2004:109 and ff.), English does allow transitive existentials with expletives along the lines of (55):²⁷

- (55) There is a man eating an orange (somewhere).

²⁷ Cedric Boeckx (p.c.) notes that sentences such as (55) are not helpful, since *eating an orange (somewhere)* probably qualifies as a reduced relative.

According to Richards, subextraction in these cases is possible (see 56b). The relevant structures are as follows:

- (56) a. [_{CP} C [_{TP} There T was [_{v*P} a friend of John's v* eating an orange in the park]]]
 b. [_{CP} Of whom_i C was [_{TP} there T [_{v*P} [a friend t_i] v* eating an orange in the park]]]?]

The facts in (56), to the extent that they are correct (but see fn. 27), hold the key to reconciling Chomsky's (2001, 2004, 2008) phase cycle (freezing of a DP being decided at the phase level) with the empirically well-supported fact that subjects become islands at SPEC-T.

From the perspective adopted here, subextraction in (42a) is ruled out because the subject is frozen at the CP phase level (it ends up in SPEC-T, a freezing position); in (42b), on the other hand, subextraction is ruled in (from the base position of the object), since the subject is not frozen at the vP phase level.²⁸

4.2. Anti-freezing SPECs

Let us now return to Chomsky's (2008) analysis of (42), which argues in favor of additional landing sites of the A-type ameliorating subextraction. I want to test this idea for Spanish, which behaves like English under the just outlined conception of phase level freezing.

To proceed rationally, consider (57) first, a version of Uriagereka's (1988) original data, modified here to accommodate Fortuny's (2008) observations:

- (57) [_{CP} De qué coche_i C te parece que ...
 of what car CL.to.you seem.3.SG that
 a. ... (?) [_{TP} T causó un escándalo [el (Spanish)
 cause.PAST.3.SG a scandal the
 conductor t_i]]]?
 driver
 b. ... ?? [_{TP} [el conductor t_i] T causó un (Spanish)
 the driver cause.PAST.3.SG a
 escándalo]]]?
 scandal
 'Of which car does it seem to you that the driver caused a scandal?'

²⁸ This would indirectly entail that Gallego & Uriagereka's (2007) analysis cannot be correct, for subextraction does not target SPEC-v in (51). The asymmetry used to defend that analysis (see 46 vs. 47) is no longer appealed to here and, as a consequence, the fact that wh-movement without pied-piping is only possible if the extraction domain is left *in situ* is left unexplained. As Cedric Boeckx points out, the latter phenomenon should be related to freezing: extraction without pied-piping is barred from freezing positions.

In (58) I run the crucial test. I add the modal verb *podría* (Eng. *could*) and the auxiliary *haber* (Eng. *have*), and then subextract the same PP. Unfortunately, the outcome is not significantly better to my ear – perhaps there is a contrast, but too slight to conclude anything from it.

- (58) [_{CP} De qué coche_i C te parece que ... (Spanish)
of what car CL.to.you seem.3.SG that
... ?/?[_{TP} [el conductor t_i]_j T podría haber
the driver could.3.SG have.INF
causado un escándalo]]]?
caused a scandal
‘Of which car does it seem to you that the driver could have
caused a scandal?’

Under the assumption that A-movement targets all available positions (Boeckx 2007), the outcome in (58) forces us to reconsider Chomsky’s analysis. Let us focus on the raising scenario again, which I repeat in (59), signalling the relevant strong phase boundaries:

- (59) [_{CP}Of which car_i C is [_{TP}[the T likely [_{TP}t_j to [_{v*P}t_j cause a driver t_i]_j scandal]]]]]?
↓ strong phase ↓ strong phase

This example raises the question of where exactly subextraction of *of which car* takes place from. If derivations unfold in a phase by phase fashion, then there is a way to explain (59) that is consistent with the phase level freezing account of the *Subject Condition* put forward in the previous section. If operations apply at the phase level (again, be it strong or not), then the first derivational stage of (59) corresponds to (60):

- (60) [_{v*P} the driver of which car v* [_{vP} cause a scandal]]
1st derivational stage

At the phase level, v* assigns accusative Case to the object, but the subject remains active. Under standard assumptions, the next strong phase would correspond to matrix CP, since all the elements in between are considered φ-defective. At this point, though, I want to push Chomsky’s (2001) proposal about the v*P/vP to its limits, and argue for the presence of a defective C head (analogous to passive/unaccusative *v* in the verbal domain), as shown below.²⁹

²⁹ This hypothesis provides a rationale for T to project in raising and ECM cases. If the role of non-phase heads, T and V, is that of being a placeholder for φ-features (see Chomsky 2008, Richards 2007), it is unclear why T projects when there is no phase head from which to inherit φ-features (but see Chomsky 2007:21 for an alternative suggestion). The possibility that defective clauses project a CP has been independently argued for by Epstein & Seely (2006) and Ormazabal (1995).

- (61) [_{CP} C [_{TP} T-to [_{v*P} the driver of which car v* [cause a scandal]]]
 2nd derivational stage

In (61), I am taking phase level evaluation to operate as expected, with C-T being capable of targeting elements in the edge of the lower v*P. Suppose now that C-T raises the subject to SPEC-T and the wh-chunk to SPEC-C, as depicted in (62):

- (62) ... likely [_{CP} of which car_i C [_{TP} [the driver t_i]_j T-to [_{v*P} t_j v* [_{VP} cause a scandal]]]

This is the key stage. In (62), there is no freezing of the subject, since it has not been assigned Case; consequently, subextraction is granted within such a defective CP.³⁰

The next (and final) question that arises is why (58) is ruled out, if a derivation like the one in (61)–(62) can be invoked. My answer is that, crucially, the derivation in (61)–(62) cannot be invoked. I claim that this is so because adding modals and auxiliaries does not add (weak/strong) phases. Modals are typically (though not exclusively) analyzed as T heads, and T heads do not qualify as phase heads of any sort.³¹ In the specific case of (58), *podría* and *haber* are two independent heads within the CP phase selected by *parecer* (Eng. *seem*). Since the subject ends up occupying a freezing position within that CP phase, the A-chain is frozen, and subextraction is impossible, no matter where it takes place from, or how many modal heads we add.

Interestingly enough, there is still one context where Chomsky's (2008) analysis of (42) can be tested: the Spanish example in (63).

- (63) A Juan le parece [_{CP} que ... (Spanish)
 to Juan CL.to.him seem.3.SG that ...
 ... el conductor de un Ferrari resultó
 the driver of un Ferrari turn-out.PAST.3.SG
 tener una avería]
 have.INF a breakdown
 'It seems to Juan that the driver of a Ferrari turned out to have a breakdown.'

In this example, Spanish *resultar* (Eng. *turn out*, see Torrego 1996) selects for a defective CP phase, containing the infinitival *tener* (Eng. *have*). Since nominative Case cannot be assigned within that CP, we expect

³⁰ Let me insist that I am crucially assuming that TRANSFER does not apply here, but that the derivation unfolds step-by-step regardless. Both strong and weak phases thus count as evaluation points, but only the former trigger TRANSFER and are capable of rendering DPs frozen.

³¹ There are, of course, independent proposals about modal verbs (see Barbiers 2006; den Dikken 1994; Solà 2002; and references therein), some of them analyzing these as instances of *v*. In this paper, I take modals to be projected in functional heads that hang around a unique phase head (see Butler 2003 for discussion).

subextraction to be better within that domain. As (64) shows, judgments are as expected.³²

- (64) ?[_{CP} De qué coche_i C te parece ... (Spanish)
of what car CL.to.you seem.3.SG
... [_{CP} que [_{TP} [el conductor t_i]_j resultó [_{CP} t_j T [_{v*P} t_j
that the driver turn.out.PAST.3.SG
tener una avería]]]]?
have.INF a breakdown
‘Of which car does it seem to you that driver turned out to have a
breakdown?’

In (65) below I indicate the position where subextraction takes place from. As can be seen, I assume that a defective C, projected in the *resultar* dependent clause, triggers A-movement of the subject DP to SPEC-T, and A-bar-movement of the wh-phrase to SPEC-C. As a consequence of nominative Case not being assigned, the DP is not frozen, and subextraction within that domain is possible.

- (65) [_{CP} de qué coche_i C [_{TP} [el conductor t_i]_j T [_{v*P} t_j tener una avería]]]]?

I hasten to insist that, in (64), it does not really matter whether the subject ends up occupying a preverbal (hence freezing) position; since subextraction has occurred in a lower, non-freezing phase, the result is acceptable (though perhaps not perfect).

Let us recap. If the previous discussion is on the right track, there are various conclusions worth mentioning. First and foremost, subextraction from SPEC-*v** is licit cross-linguistically (as expected under freezing-based accounts, like Boeckx’s 2003). Second, Chomsky’s (2008) analysis of the facts in (42) must be qualified; as we have seen, the specifiers of defective T heads indeed allow islandhood circumvention, but this follows not from operations interweaving, but from phase level freezing. If defective CPs (typically analyzed as bare TPs), like defective *v*Ps, constitute autonomous computational domains, and they fail to freeze DPs, then we have a rationale for why subextraction can take place. This conclusion is close in spirit to Boeckx’s (2007) claim that operations apply as soon as possible, without waiting until the final landing site is available. Since I am assuming the phase cycle of Chomsky (2008), I understand ‘as-soon-as-possible’ as ‘within a cyclic domain’, regardless

³² Judgments are again subtle. Note that it is crucial for the matrix verb to be *parecer*, since the use of this verb precludes an unwanted aboutness reanalysis of the subextracted PP (see fn.18).

of whether such domain is complete (freezing inducing) or defective (non-freezing).

From the discussion it also follows that successive cyclic A-movement alone cannot help circumvent the *Subject Condition*: freezing effects, evaluated at the phase level, suffice to account for subextraction paradigms. This does not mean that A-movement does not target all the specifiers along the way, it simply means A-movement is not in and of itself an anti-freezing strategy.

5. Conclusions

This paper has investigated the interaction of successive cyclic movement and Huang's (1982) CED, in the context of Chomsky's (2008) recent phase-based analysis of the *Subject Condition*. With Boeckx (2003, 2008a), I have concluded that subjects become islands upon moving to SPEC-T, a freezing position. In order to account for the minimal pair in (66), which poses a problem for standard formulations of the *Subject Condition*, I have proposed that freezing is evaluated at the phase level:

- (66) a. *_{[CP} Of which car_i did _{[TP} [the (driver, picture) t_i]_j T _{[v*P} t_j v*
cause a scandal]]]?
b. _{[CP} Of which car_i was _{[TP} [the (driver, picture) t_i]_j T _{[vP} v
awarded t_j a prize]]]?

[from Chomsky 2008:147]

Under the analysis sketched here, wh-movement in (66b) is possible because subextraction takes place in the lower vP, being triggered by v. Although vP does not qualify as a strong phase (it does not trigger TRANSFER, and v cannot assign accusative Case), I take it to be an autonomous domain for computational purposes regardless (see Boeckx 2008c; Marantz 2007; and Richards 2004, 2006 for additional discussion about vP's phasehood). Since the object DP is still active within this lower domain, subextraction is possible:

- (67) _{[vP} of which car_i _{[vP} [the (driver, picture) t_i]_j v _{[vP} awarded t_j a
prize]]]

By the same logic, subextraction in (66a) is predicted to yield an unacceptable result, as the subject is frozen within the CP phase. If correct, SPEC-v* is not a freezing position, as Chomsky (2008) argues, a conclusion that is empirically well supported (see Uriagereka 1988, in progress).

A second goal of the paper has been to study the connection between the *Subject Condition* and successive cyclic A-movement. In accord with Boeckx (2007), I have argued that all types of movement (A and A-bar) proceed by small (very local) steps through all the specifiers available. Such a view of successive cyclic movement opens the door, as Chomsky

notes, for intermediate steps to temporarily eliminate islandhood, under the assumption that those intermediate positions trigger no freezing effect. Chomsky (2008) makes his point by invoking the asymmetry between the examples in (21) and (43), clustered in (68) below:

- (68) a. *[_{CP} Of which car_i C did [_{TP} [the driver t_i]_j T [t_j v* cause a scandal]]]?
 b. [_{CP} Of which car_i C is [[the driver t_i]_j T likely [t_j T to [t_j v* cause a scandal]]]]?
 c. [_{CP} Of which car_i C did they believe [the driver t_i]_j [t_j T to [t_j have caused a scandal]]]]?

[from Chomsky 2008:153]

I have extended the phase level freezing analysis of (66)–(67) to (68b) and (68c). Assuming a defective counterpart of C in these cases (so that computation proceeds by small subarrays in raising and ECM contexts too), I have claimed that subextraction takes place in a phase where freezing fails to obtain: in the raising case, the CP dependent of *be-likely*; in the ECM one, the CP dependent of *believe*. As has been shown, the effect seems to be found in Spanish too, as (69b) appears to be somewhat better than (69a):³³

- (69) a. *[_{CP} De qué coche_i tuvo [el (Spanish)
 of what car have.PAST.3.SG the
 conductor t_i] una avería]?
 driver a breakdown
 ‘Of which car did the driver have a breakdown?’

³³ The example in (69b) is ruled out if *resultar* subcategorizes for a volitional predicate, like *atropellar* (Eng. *knock down*), for reasons that are murky:

- (i) *[_{CP} De qué coche_i te parece [_{CP} que [_{TP} [el ... (Spanish)
 of what car CL.to.you seem.3.SG that the
 ... conductor t_i]_j T resultó [_{CP} t_i [_{TP} t_j T [_{v*P} t_j atropellar
 driver turn-out.PAST.3.SG run-over.INF
 a un viandante]]]]]]]?
 to a pedestrian

‘Of which car does it seem to you that the driver happened to run over a pedestrian?’

The same judgment seems to hold in English, as Noam Chomsky points out to me. According to Chomsky, there is a progressive contrast between (ii), (iii), and (iv) – the stars are mine.

- (ii) [_{CP} Of which car_i C was [_{TP} [the driver t_i]_j T [_{vP} awarded t_j a prize]]]?
 (iii) *[_{CP} Of which car_i C did [_{TP} [the driver t_i]_j T [_{v*P} t_j receive a prize]]]?
 (iv) **[_{CP} Of which car_i C did [_{TP} [the driver t_i]_j [_{v*P} t_j hit a pedestrian]]]?

Chomsky admits that (ii) and (iii) may both sound degraded because pied-piping is, in general, a marginal strategy in English (see fn.12). The interesting contrast is between (iii) and (iv). As previously mentioned, Chomsky observes that, somehow, subextraction from agentive (volitional) subjects is worse. These facts are certainly related to the ones I discussed in section 3.2.

- b. ?_{[CP De qué coche_i te parece _{[CP que (Spanish)}}
of what car CL.to.you seem.3.SG that
_{[TP [el conductor t_i] T resultó _{[CP t_i _{[TP t_j T [_{v*P} t_j}}}
the driver turn-out.PAST.3.SG
tener una avería
have.INF a breakdown
‘Of which car does it seem to you that the driver turned out to
have a breakdown?’

Intriguingly, such amelioration is not found if auxiliaries and modals are added, as (70) shows. I take these data to indicate not that A-movement paths are punctuated, but rather that auxiliaries and modals do not head independent cycles; they behave like heads that simply ‘stretch’ the T domain. If this is so, then these heads do not project a non-freezing phase, which is necessary for CED circumvention.

- (70) _{[CP De qué película_i C te parece ... (Spanish)}
of what movie CL.to.you seem.3.SG
... _{[CP que ??/*[el director t_i] ganó un Óscar]]?}
that the director win.PAST.3.SG an Oscar
‘Of which movie does it seem to you that the director won an
Oscar?’
... ??[el director t_i] debería haber podido (Spanish)
the director should.3.SG have.INF could
ganar un Óscar]
win.INF an Oscar
‘Of which movie does it seem to you that the director should
have been able to win an Oscar?’

Interestingly, the same effect is found in English (Marc Richards, p.c.), where adding auxiliaries does not improve grammaticality:

- (71) *_{[CP Of which car_i C may _{[TP [the driver t_i] T have been [_{v*P} t_j}}
causing trouble]]]?

Considered together, these observations reinforce the leading role played by the phase level as the unique derivational check-point for all operations. This must be correct even in the case of so-called weak phases (passive/unaccusative *v*Ps, and raising/ECM CPs too), which, though irrelevant for Case assignment (hence, freezing) and TRANSFER, signal a boundary for evaluation too. This latter point is not only welcome but in fact expected, if the main role of phases is to establish small and autonomous domains for meaningful cyclic computation.

References

- ABELS, K. 2003. *Successive Cyclicity, Anti-Locality, and Adposition Stranding*, Ph.D. diss., U.Conn.

- ABELS, K. & BENTZEN, K. 2009. A Note on the Punctuated Nature of Movement Paths. In *Catalan Journal of Linguistics 9: Spelling-Out Universal Grammar*, eds. J. Fortuny & A. J. Gallego, Bellaterra: Publicacions de la UAB.
- ALEXIADOU, A. & ANAGNOSTOPOULOU, E. 2007. The Subject-In-Situ Generalization Revisited. *Interfaces + Recursion = Language? Chomsky's minimalism and the view from syntax-semantics*, eds. U. Sauerland & H.-M. Gärtner, 31–59. Berlin: Mouton de Gruyter.
- ARAD, M. 2002. Universal features and language-particular morphemes. *Theoretical Approaches to Universals*, ed. A. Alexiadou, 15–40. Amsterdam: John Benjamins.
- BARBIERS, S. 2006. The Syntax of Modal Auxiliaries. *The Blackwell Companion to Syntax (vol. 5)*, eds. M. Everaert & H. van Riemsdijk, 1–22. Oxford: Blackwell.
- BELLETTI, A. & RIZZI, L. 1988. Psych-Verbs and Theta-Theory. *Natural Language and Linguistic Theory* 6:291–352.
- BELLETTI, A. 2004. Aspects of the Low IP Area. *The Structure of CP and IP. The Cartography of Syntactic Structures (vol. 2)*, ed. L. Rizzi, 16–51. Oxford (New York): Oxford University Press.
- BOECKX, C. 1999. Conflicting c-command requirements. *Studia Linguistica* 53:227–250.
- BOECKX, C. 2001. Scope reconstruction and A-Movement. *Natural Language and Linguistic Theory* 19:503–519.
- BOECKX, C. 2003. *Islands and chains. Stranding as resumption*. Amsterdam: John Benjamins.
- BOECKX, C. 2007. *Understanding Minimalist syntax. Lessons from locality in long-distance dependencies*. Malden, MA.: Blackwell.
- BOECKX, C. 2008a. *Aspects of the syntax of agreement*. London: Routledge.
- BOECKX, C. 2008b. *Bare Syntax*. Oxford (New York): Oxford University Press.
- BOECKX, C. 2008c. *Elementary syntactic structures. A Minimalist inquiry*. Ms., Harvard University.
- BOECKX, C. & GROHMANN, K. 2007. Remark: Putting phases in perspective. *Syntax* 10:204–222.
- BOŠKOVIĆ, Ž. 2007. Don't feed your movements. *Working Papers in Scandinavian Syntax* 80:1–15.
- BOŠKOVIĆ, Ž. & TAKAHASHI, D. 1998. Scrambling and Last Resort. *Linguistic Inquiry* 29:347–66.
- BROECKHUIS, H. 2006. Extraction from subjects: some remarks on Chomsky's "On phases". *Organizing Grammar: Linguistic Studies in Honor of Henk van Riemsdijk*, eds. H. Broekhuis et al., 59–68. Berlin: Mouton de Gruyter.
- BUTLER, J. 2003. A Minimalist treatment of modality. *Lingua* 113:967–996.
- CHOMSKY, N. 1973. Conditions on Transformations. *A festschrift for Morris Halle*, eds. in S. Anderson & P. Kiparsky, 232–286. New York: Holt, Rinehart & Winston.
- CHOMSKY, N. 1981. *Lectures on Government and Binding*. Dordrecht: Foris Publications.
- CHOMSKY, N. 1986. *Barriers*. Cambridge, MA.: MIT Press.
- CHOMSKY, N. 1993. A Minimalist Program for linguistic theory. *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, eds. K. Hale & S. J. Keyser, 1–52. Cambridge, MA.: MIT Press.
- CHOMSKY, N. 1995. Categories and transformations. *The Minimalist Program*, 219–394, Cambridge, MA.: MIT Press.
- CHOMSKY, N. 2000. Minimalist inquiries: The framework. *Step by Step. Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. R. Martin et al., 89–155. Cambridge, MA.: MIT Press.

- CHOMSKY, N. 2001. Derivation by phase. *Ken Hale: A life in language*, ed. M. Kenstowicz, 1–52. Cambridge, MA.: MIT Press.
- CHOMSKY, N. 2004. Beyond explanatory adequacy. *Structures and beyond. The cartography of syntactic structures (Vol. 3)*, ed. A. Belletti, 104–131. Oxford (New York): Oxford University Press.
- CHOMSKY, N. 2005. Three factors in language design. *Linguistic Inquiry* 36:1–22.
- CHOMSKY, N. 2007. Approaching UG from below. *Interfaces + Recursion = Language? Chomsky's Minimalism and the view from syntax-semantics*, eds. U. Sauerland & H-M. Gärtner, 1–30. Berlin: Mouton de Gruyter.
- CHOMSKY, N. 2008. On Phases. *Foundational Issues in Linguistic Theory*, eds. C. Otero et al., 133–166. Cambridge, MA.: MIT Press.
- CHOMSKY, N. & LASNIK, H. 1977. Filters and Control. *Linguistic Inquiry* 8:425–504.
- DEN DIKKEN, M. 1994. Auxiliaries and Participles. *Proceedings of NELS 24*, ed. M. González, 65–79. Amherst: GLSA.
- EPSTEIN, S. & SEELY, D. 2006. *Derivations in Minimalism: Exploring the Elimination of A-Chains and the EPP*. Cambridge: Cambridge University Press.
- FORTUNY, J. 2008. *The emergence of order in syntax*. Amsterdam: John Benjamins.
- FRANCO, J. 1990. Towards a typology of Psych Verbs: Evidence from Spanish. *MIT WPL* 12:46–62.
- GALLEGO, A. 2007. *Phase Theory and parametric variation*, Ph.D. diss., UAB.
- GALLEGO, A. & URIAGEREKA, J. 2007. Conditions on sub-extraction. *Coreference, modality and focus. Studies on the syntax-semantics interface*, eds. L. Eguren & O. Fernández-Soriano, 45–70. Amsterdam: John Benjamins.
- HALE, K. & KEYSER, S. 2002. *Prolegomenon to a theory of argument structure*. Cambridge, MA.: MIT Press.
- HORNSTEIN, N. 2001. *Move! A Minimalist theory of construal*. Oxford: Blackwell.
- KAYNE, R. 2002. On some prepositions that look DP-internal: English *of* and French *de*. *Catalan Journal of Linguistics* 1, eds. J. Mascaró & G. Rigau, 71–115. Bellaterra: Publicacions de la UAB.
- KAYNE, R. 2008. *Antisymmetry and the lexicon*. Ms., New York University.
- KUNO, S. 1973. Constraints on internal clauses and sentential subjects. *Linguistic Inquiry* 4:363–385.
- LASNIK, H. 1999. Chains of arguments. *Working Minimalism*, eds. S. Epstein & N. Hornstein, 189–215. Cambridge, MA.: MIT Press.
- LASNIK, H. 2001. Subjects, objects, and the EPP. *Objects and other subjects*, eds. W. Davies & S. Dubinsky, 103–121. Dordrecht: Kluwer.
- LASNIK, H. 2006. Conceptions of the cycle. *Wh-movement: moving on*, eds. L. Cheng & N. Corver, 197–216. Cambridge, MA.: MIT Press.
- LASNIK, H. & BOECKX, C. 2006. Long NP-Movement. *The Blackwell Companion to Syntax (Vol. 3)*, eds. M. Everaert & H. van Riemsdijk, 109–130. Oxford: Blackwell.
- LASNIK, H. & SAITO, M. 1992. *Move α : Conditions on its applications and outputs*. Cambridge, MA.: MIT Press.
- LASNIK, H. & URIAGEREKA, J. (with C. BOECKX). 2005. *A course in Minimalist syntax. Foundations and prospects*. Oxford: Blackwell.
- LEGATE, J. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34:506–516.
- MARANTZ, A. 2007. Phases and words. *Phases in the theory of grammar*, ed. S.-H. Choe, 191–220. Seoul: Dong In.

- MATEU, J. 2002. *Argument structure: Relational construal at the syntax–semantics interface*, Ph.D. diss, UAB.
- MAYR, C. 2007. Stylistic inversion and VP-externalization. Ms., Harvard University.
- NISSENBAUM, J. 2000. *Investigations of covert phrase movement*, Ph.D. diss, MIT.
- NÚÑES, J. 2004. *Linearization of chains and sideward movement*. Cambridge, MA.: MIT Press.
- ORMAZABAL, J. 1995. *The syntax of complementation: on the connection between syntactic structure and selection*, Ph.D. diss., U.Conn.
- ORMAZABAL, J., URIAGEREKA, J. & URIBE-ÉTXEBARRIA, M. 1994. Word order and wh-movement: towards a parametric account. Ms., U.Conn/EHU/UMD/MIT.
- ORDÓÑEZ, F. 1997. *Word order and clause structure in Spanish and other Romance languages*, Ph.D. diss., CUNY.
- PESETSKY, D. 1995. *Zero Syntax. Experiences and cascades*. Cambridge, MA.: MIT Press.
- PESETSKY, D. 2000. *Phrasal movement and its kin*. Cambridge, MA.: MIT Press.
- PESETSKY, D. & TORREGO, E. 2004. Tense, Case, and the nature of syntactic categories. *The syntax of time*, eds. J. Guéron & J. Lecarme, 495–537. Cambridge, MA.: MIT Press.
- POSTAL, P. 1974. *On raising: One rule of English grammar and its theoretical implications*. Cambridge, MA.: MIT Press.
- RICHARDS, M. 2004. *Object Shift and scrambling in North and West Germanic: A case study in symmetrical syntax*, Ph.D. diss., University of Cambridge.
- RICHARDS, M. 2006. *Deriving the edge: What's in a phase?* Ms., University of Cambridge.
- RICHARDS, M. 2007. On feature inheritance: An argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38:563–572.
- RIZZI, L. 2006. On the form of chains: Criterial positions and ECP effects. *Wh-Movement: Moving on*, eds. L. Cheng & N. Corver, 97–133. Cambridge, MA.: MIT Press.
- SOLÀ, J. 2002. Clitic climbing and null subject languages. *Catalan Journal of Linguistics* 1:225–255.
- SROUSE, J. 2007. *A program for experimental syntax*. Ph.D. diss., UMD.
- STEPANOV, A. 2001. *Cyclic domains in syntactic theory*, Ph.D. diss., U.Conn.
- STEPANOV, A. 2007. The end of CED? Minimalism and extraction domains. *Syntax* 10:80–126.
- SUÑER, M. 2003. The lexical preverbal subject in a Romance null subject language: Where are thou? *A Romance perspective on language knowledge and use: Selected papers from the 31st Linguistic Symposium on Romance Languages (LSRL), Chicago, 19–22 April 2000*, eds. R. Núñez-Cedeño et al., 22–38. Amsterdam: John Benjamins.
- TAKAHASHI, D. 1994. *Minimality of movement*, Ph.D. diss., U.Conn.
- TICIO, M. 2005. Locality and anti-locality in Spanish DPs. *Syntax* 8:229–286.
- TORREGO, E. 1984. On inversion in Spanish and some of its effects. *Linguistic Inquiry* 15:103–129.
- TORREGO, E. 1985. On empty categories in nominals. Ms., U.Mass Boston.
- TORREGO, E. 1996. Experiencers and raising verbs. *Current issues in comparative grammar*, ed. R. Freidin, 101–120. Dordrecht: Kluwer.
- TORREGO, E. 1998. *The dependencies of objects*. Cambridge, MA.: MIT Press.
- URIAGEREKA, J. 1988. *On government*, Ph.D. diss., U.Conn.
- URIAGEREKA, J. 1995. Aspects of the syntax of clitic placement in Western Romance. *Linguistic Inquiry* 26:79–123.

- URIAGEREKA, J. 1999a. Multiple Spell-Out. *Working Minimalism*, eds. N. Hornstein & S. Epstein, 251–282. Cambridge, MA.: MIT Press.
- URIAGEREKA, J. 1999b. Minimal restrictions on Basque movements. *Natural Language and Linguistic Theory* 17:403–444.
- URIAGEREKA, J. 2006. Complete and partial Infl. *Agreement Systems*, ed. C. Boeckx, 267–298. Amsterdam: John Benjamins.
- URIAGEREKA, J. in progress. *Spell-Out consequences*. Ms., UMD.
- WEXLER, K. & CULICOVER, P. 1981. *Formal principles of language acquisition*. Cambridge, MA.: MIT Press.

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